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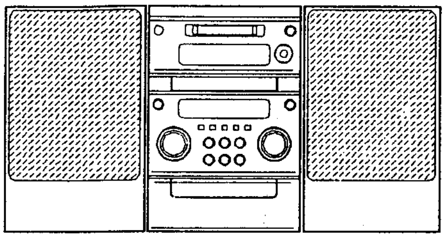
aiwa

AIWA -02467

aiwa SERVICE

XR-MD50

SERVICE MANUAL



MD/CD STEREO SYSTEM

- BASIC TAPE MECHANISM : 6ZM-1 AR2
- BASIC CD MECHANISM : 3ZG-3 YA3N
- BASIC MD MECHANISM : 6ZG-5 A

- TYPE : U, EZ

SYSTEM	CD – CASSEIVER	SPEAKER	REMOTE CONTROLLER
XR-MD50	CX-SLMD50	SX–SLM50	RC UNIT, 6AS19

2467

S/M Code No. 09–974–178–9FP

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G－　－	
G－　－	
G－　－	

アイワ株式会社
AIWA CO.,LTD.

9301978, 750038

Tokyo Japan

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SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM / MW Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 uV/m
Antenna	Loop antenna

<LW Tuner section>(EZ)

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 uV/m
Antenna	Loop antenna

<Amplifier section>

Power output	U : 25 watts per channel, Min. RMS at 6 ohms, from 60 Hz to 15 kHz, with no more than 1% Total Harmonic Distortion EZ : Rated : 25W + 25W (6 ohms, T.H.D. 1%, 1 kHz/DIN 45500) Reference : 30W + 30W (6 ohms, T.H.D. 10%, 1 kHz/DIN 45324) DIN MUSIC POWER 38W + 38W
Total harmonic distortion (U)	0.1% (18 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX : 400 mV
Outputs	SUPER WOOFER: 1.9 V SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo minijack) : accepts headphones of 16 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	CRo_2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz –15000 Hz
Singnal-to noise ratio	60 dB (Dolby B NR ON, CrO_2 tape peak level)
Recording system	AC bias
Heads	Deck : Recording/Playback/ erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	88 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<MD recorder section>

Scanning method	Non-contact optical scanner (Semiconductor laser application)
Recording system	Magnetic polarity modulation overwrite system
Rotation speed	Approx. 400 - 900 rpm (CLV)
Sampling frequency	44.1 kHz
No. of channels	Stereo: 2 channels Monaural: 1 channel
A-D, D-A converter	1 bit
Frequency	20 ~ 20000 Hz +0.5 ~ -1.5 dB
Wow and flutter	Unmeasurable

<Speaker system SX–LM50>

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 130 mm ($5^{1}/_{8}$ in.) cone type Tweeter : 25 mm (1 in.) cone type
Impedance	6 ohms
Output sound pressure level	86 dB/W/m
Dimensions (W x H x D)	200 x 307 x 235mm ($7^{7}/_{8}$ x $12^{1}/_{8}$ x $9^{3}/_{8}$ in.)
Weight	4.2 kg (9 lbs 4 oz.)

<General> (EZ)

Power requirements	230 V AC,50 Hz
Power consumption	150 W
Dimensions of main unit (W x H x D)	200 x 307 x 347.5 mm
Weight of main unit	7.5 kg

<General> (U)

Power requirements	120 V AC, 60 Hz
Power consumption	70 W
Dimensions of main unit (W x H x D)	200 x 307 x 347.5 mm ($7^{7}/_{8}$ x $12^{1}/_{8}$ x $13^{3}/_{4}$ in.)
Weight of main unit	7.5 kg (16 lbs 9 oz.)

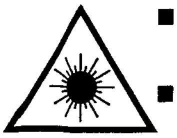
- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ᗡD are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE"and the "BBE symbol" are trademarks of BBE Sound, Inc.
  Under license from BBE Sound,Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION

L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

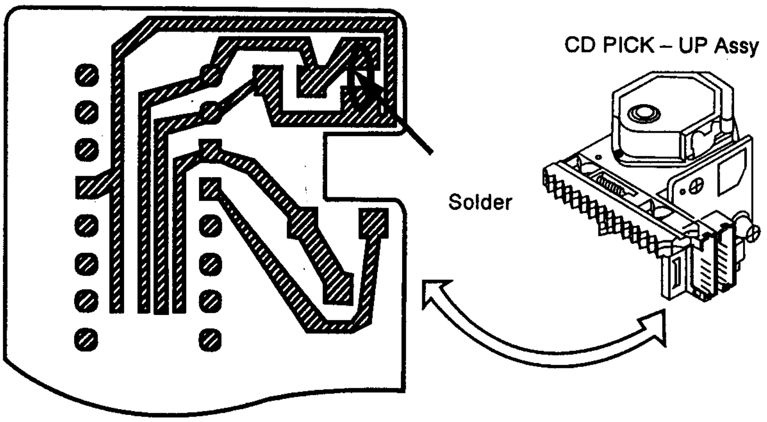
Precaution to replace Optical block

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use the clothes do not touch the diode.

1) After the connection, remove solder shown in figure right.

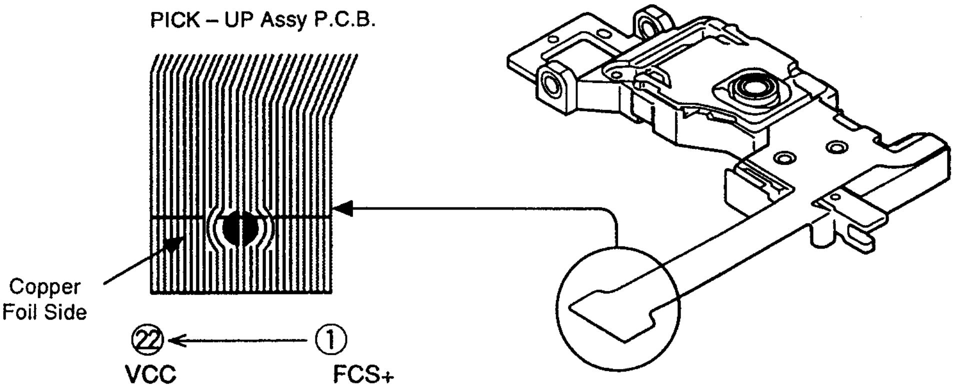
(KSS-212A)

PICK – UP Assy P.C.B.



(KMS-194C)

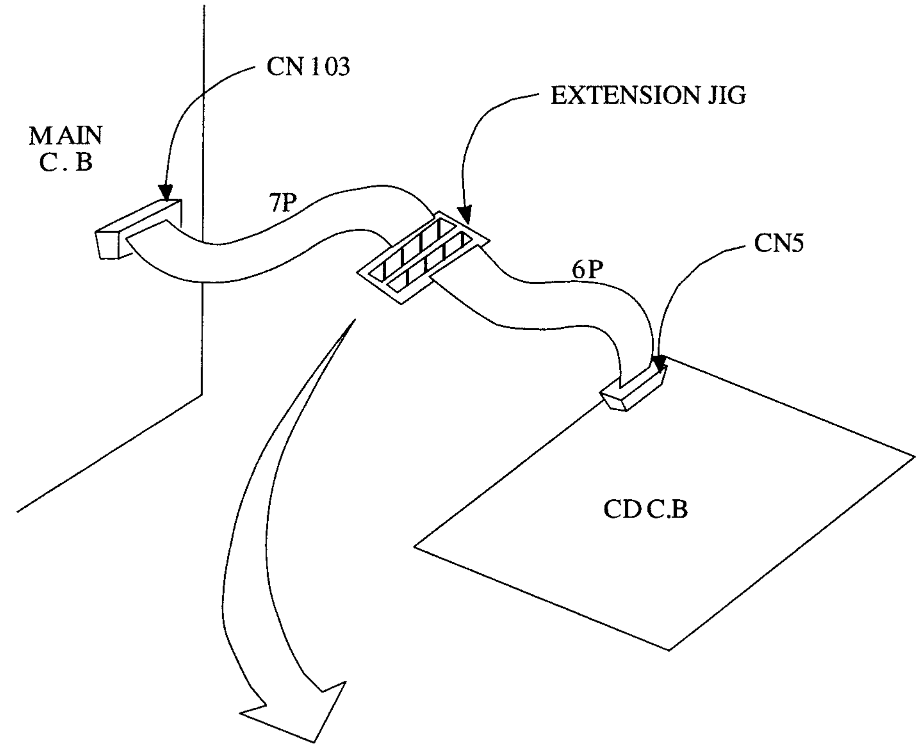
PICK – UP Assy P.C.B.



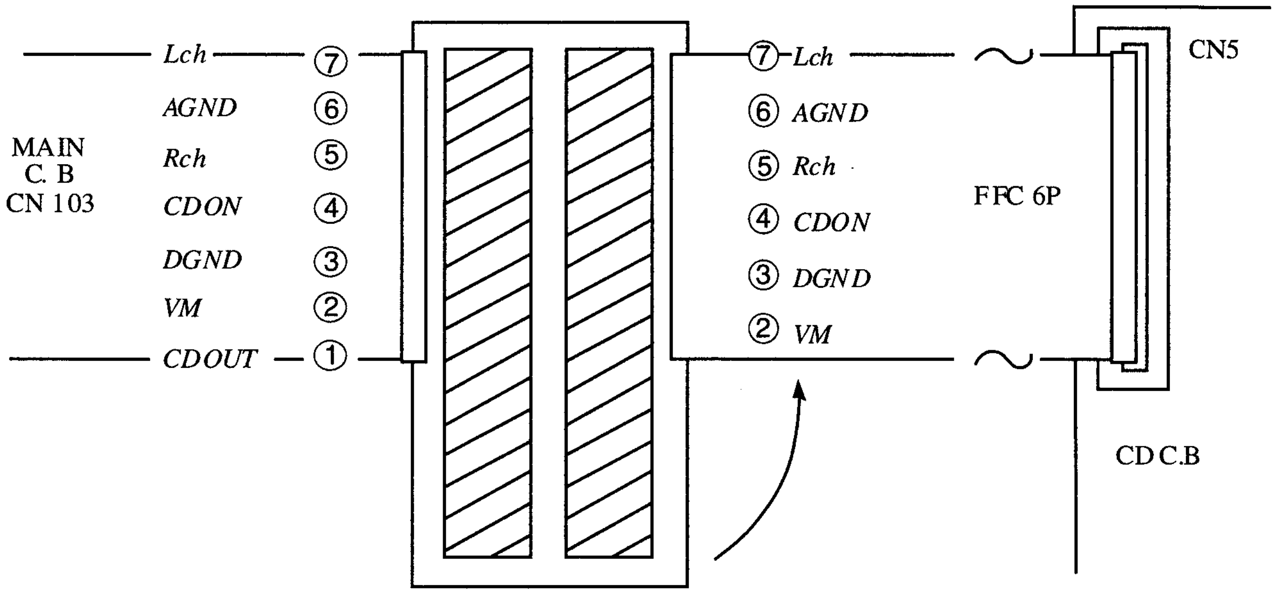
SERVICE JIG AND TOOLS

NAME	PARTS NO.
FFC EXTENSION JIG KIT	SV – J00 – 010 – 010
FFC 6P – 1.25	84 – CF3 – 663 – 010

HOW TO ASSEMBLE THE JIGS

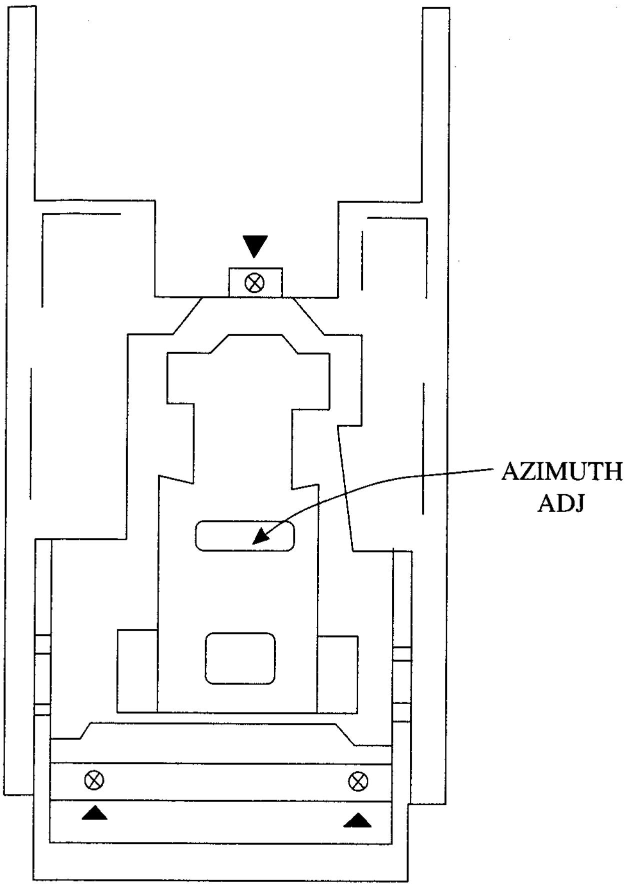

CN 103
MAIN C. B
EXTENSION JIG
7P
6P
CN5
CD C.B

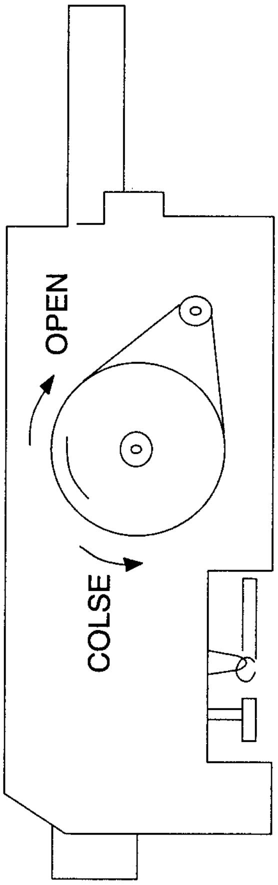
(EXTENSION JIG)


MAIN C. B CN 103
Lch ⑦
AGND ⑥
Rch ⑤
CDON ④
DGND ③
VM ②
CDOUT ①
⑦ Lch
⑥ AGND
⑤ Rch
④ CDON
③ DGND
② VM
FFC 6P
CN5
CD C.B

Insert the flat cable aligning the upper part of flat cables.

CASSETTE MECHANISM DISASSEMBLY INSTRUCTIONS





- Remove three screws (VT3-5) pointed ▲ marks in the illustration. Next, open the cassette tray half, and pull the main unit up. Close the cassette tray when taking out the main unit.

- Azimuth adjustment is able to perform from the hole located top side of the unit as illustration shown.

- Adjust motor speed with screwdriver from the hole located bottom surface of amplifier chassis.

- Operate open / close tray of cassette deck manually after removing CD C.B.

MD DISASSEMBLY INSTRUCTIONS

- How to remove the cabinet.

1. Remove the MD main unit.

1) Remove four screws (VT3-5) as indicated by ▲. (See Fig. 1)

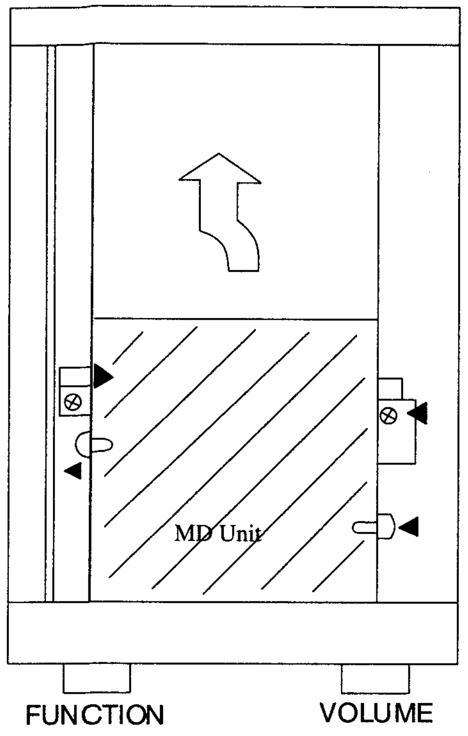

MD Unit
FUNCTION
VOLUME

Fig. 1

(Top view)

2) Remove the MD main unit to the arrow direction.

3) Remove four screws of the upper sealed case of the MD main unit.

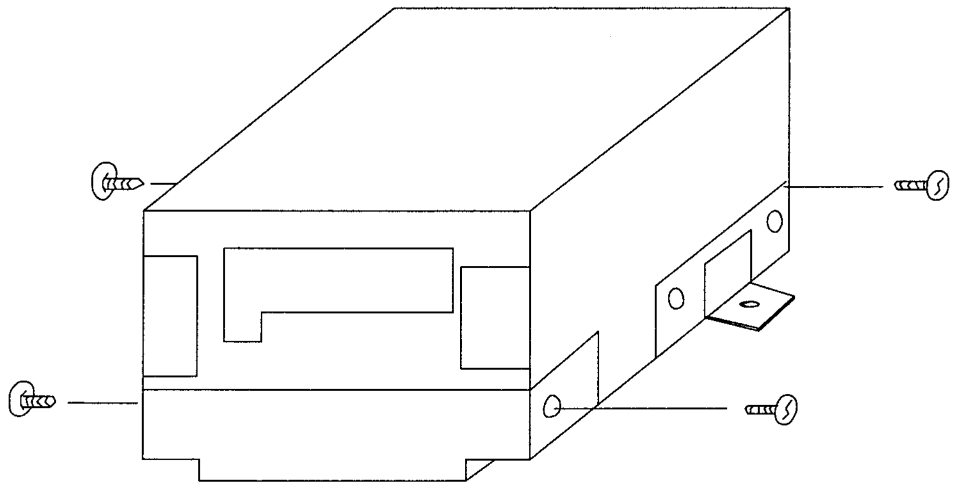


Fig. 2

2. Removal of the HLDR,MD

1) Remove the four screws (S-SCREW) and springs. Remove the HLDR, MD.

Note: This MD mechanism makes use of three types of springs. Be careful when assembling the HLDR, MD.

Spring Ⓐ : Black, 10 rolles
Spring Ⓑ : Silver, 11 rolles
Spring Ⓒ : Green, 9 rolles

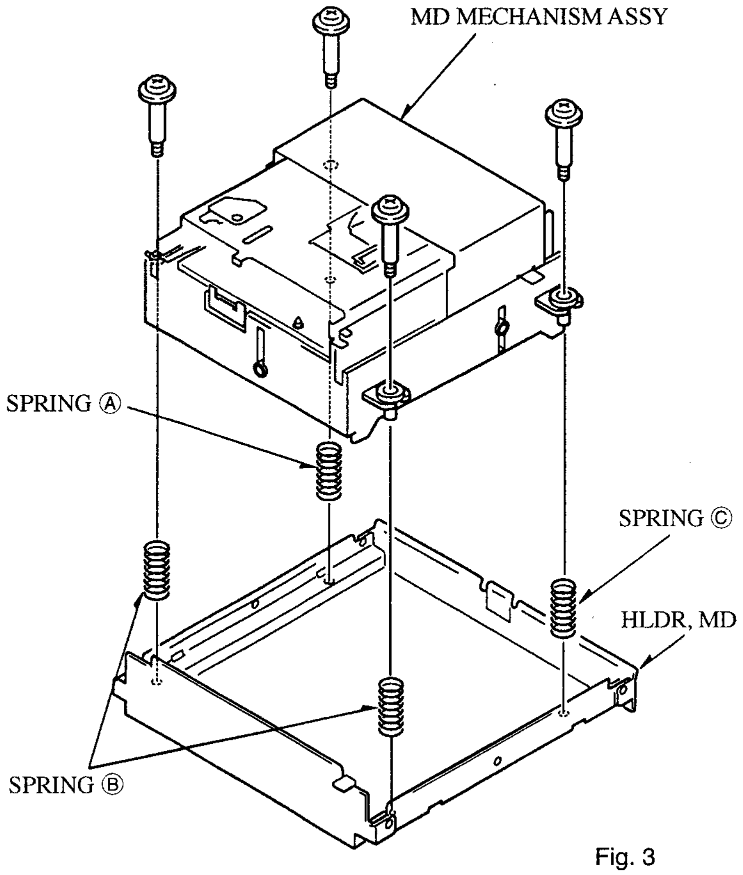

MD MECHANISM ASSY
SPRING Ⓐ
SPRING Ⓒ
HLDR, MD
SPRING Ⓑ

Fig. 3

3. Removal of the HOLD, RACK

1) Remove the six screws (VT2+1.7-6), and then remove the HOLD, RACK.

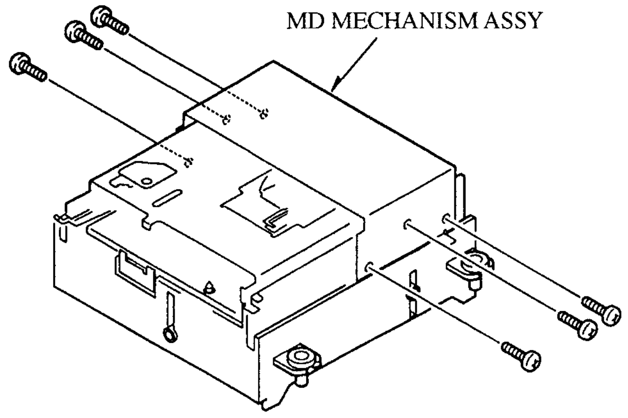

MD MECHANISM ASSY

Fig. 4

4. Removal of the CHAS, LOADING ASSEMBLY

1) Rotate the GEAR, RELAY in the direction of the arrow, and move the RACK, LOADING to the EJECT position.
2) Fit the CHAS, LOADING ASSEMBLY's boss into the RACK, LOADING L's notch. Perform the same operation for RACK, LOADING G, R.

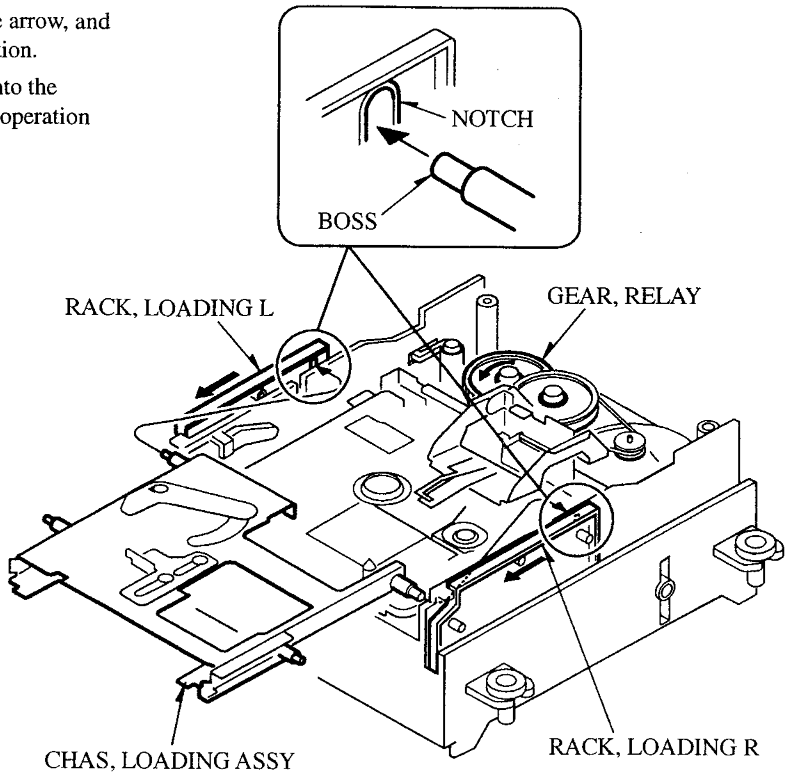

NOTCH
BOSS
RACK, LOADING L
GEAR, RELAY
CHAS, LOADING ASSY
RACK, LOADING R

Fig. 5

Note: Be certain to perform operations after verifying that the OWH (overwrite head) is sufficiently raised. If the OWH is lowered, the CHAS, LOADING ASSEMBLY will catch onto the OWH, causing it to bend.

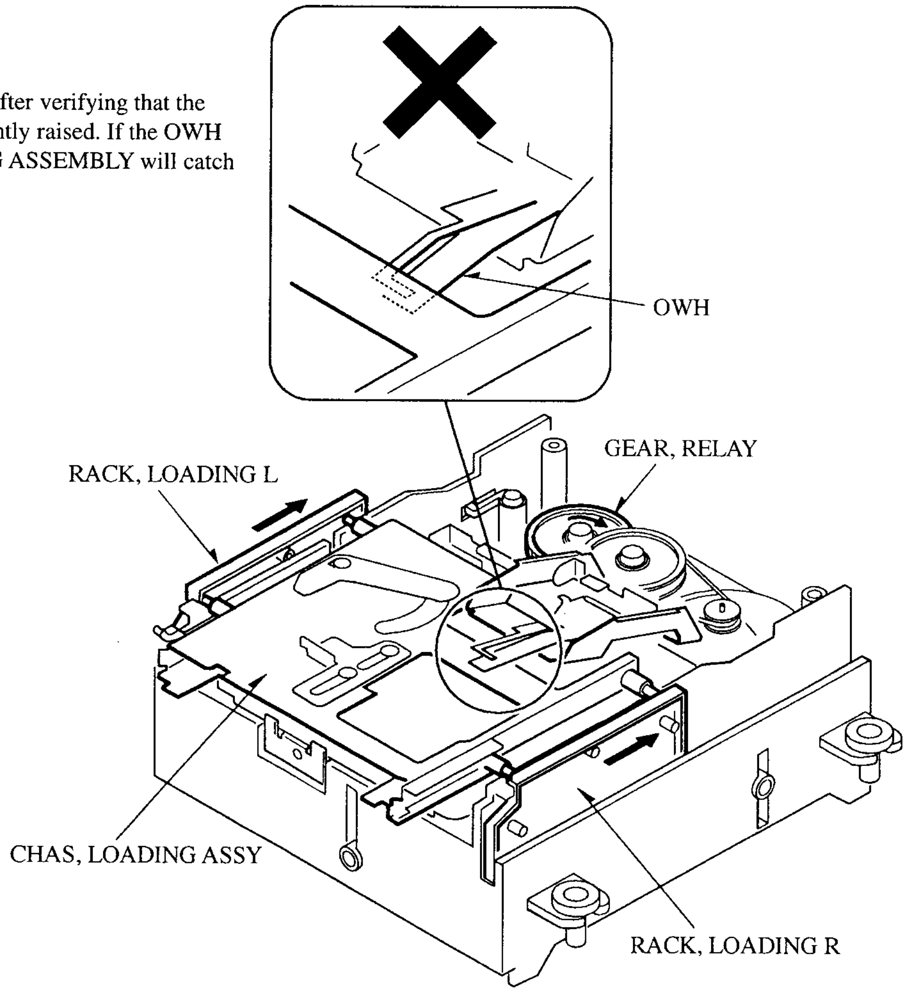

OWH
RACK, LOADING L
GEAR, RELAY
CHAS, LOADING ASSY
RACK, LOADING R

Fig. 6

5. Removal of the MD mechanism

1) Remove the two Ⓐ screws and one Ⓑ screw, and then remove the MD mechanism.
2) Remove the SPR-T, LVR LOADING L, R and the LEVER, LOADING.

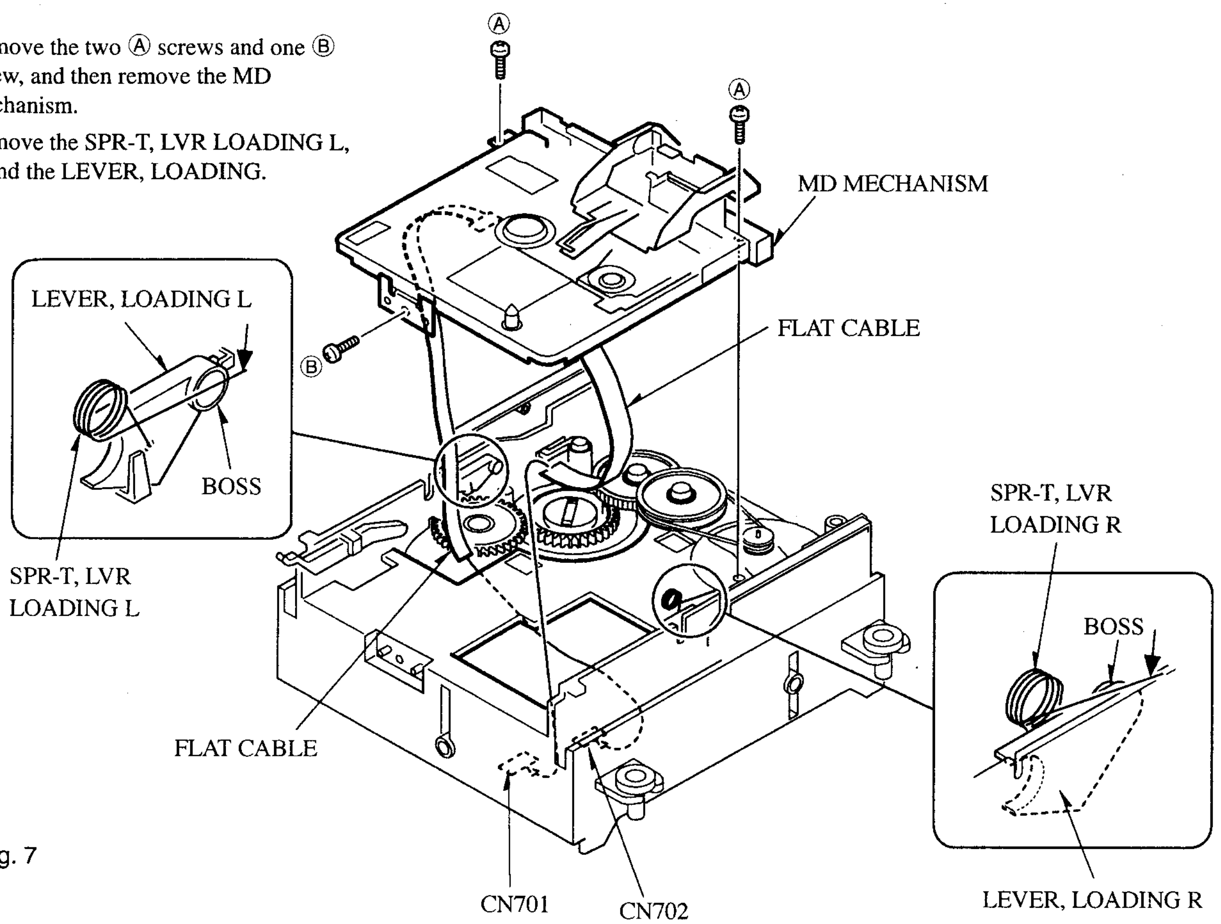
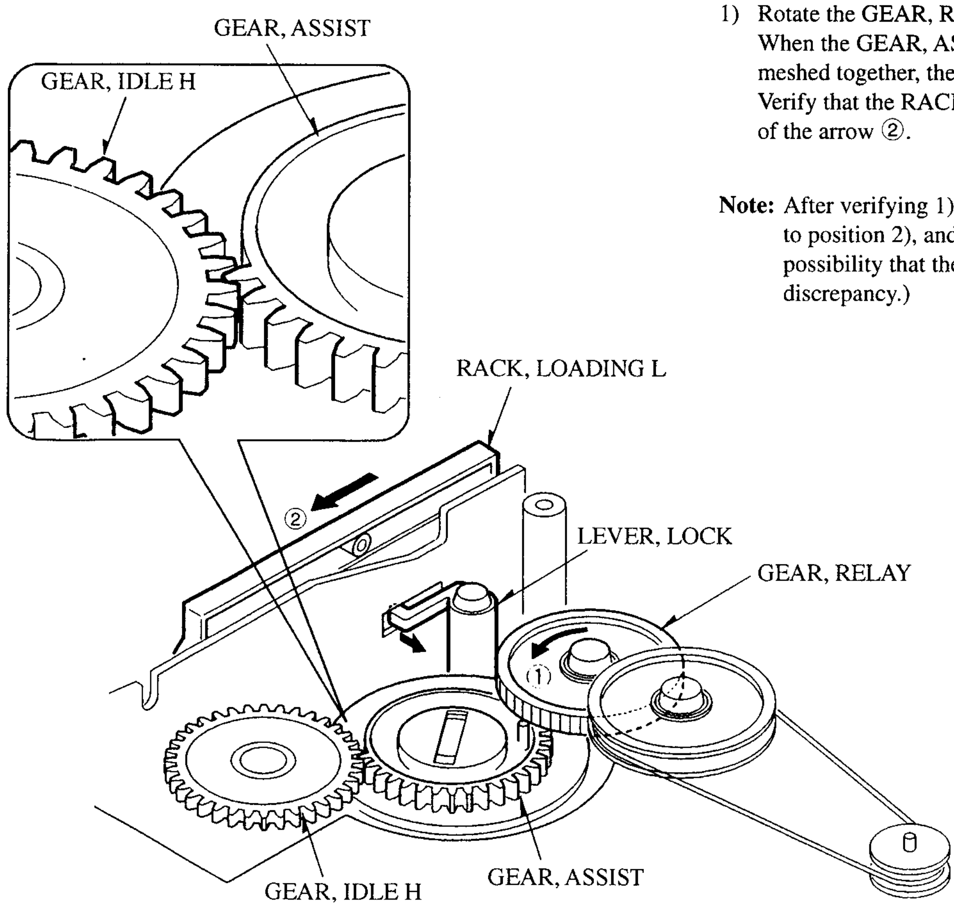

Ⓐ
Ⓐ
Ⓑ
MD MECHANISM
LEVER, LOADING L
BOSS
FLAT CABLE
SPR-T, LVR LOADING L
SPR-T, LVR LOADING R
BOSS
FLAT CABLE
CN701
CN702
LEVER, LOADING R

Fig. 7

6. Gear and lever positions


GEAR, ASSIST
GEAR, IDLE H
RACK, LOADING L
②
LEVER, LOCK
GEAR, RELAY
①
GEAR, IDLE H
GEAR, ASSIST

1) Rotate the GEAR, RELAY in the direction of the arrow ①. When the GEAR, ASSIST and the GEAR IDLE H have meshed together, the lock of the LEVER, LOCK is cancelled. Verify that the RACK, LOADING L moves in the direction of the arrow ②.

Note: After verifying 1), be certain to return each gear and lever to position 2), and install the MD mechanism. (There is a possibility that the gears may cause a topographical discrepancy.)

Fig. 8

2) When the GEAR, ASSIST's boss is in the position shown in the figure, the RACK, LOADING L is in the loading end position and the LEVER LOCK is locking the RACK, LOADING L.

Note: If the GEAR, ASSIST's boss deviates from the center in the direction of the arrow, it is not possible to perform EJECT. After verifying, be certain to return each gear and lever to the positions shown in the figure, and install the MD mechanism. (There is a possibility that the gears may cause a topographical discrepancy.)

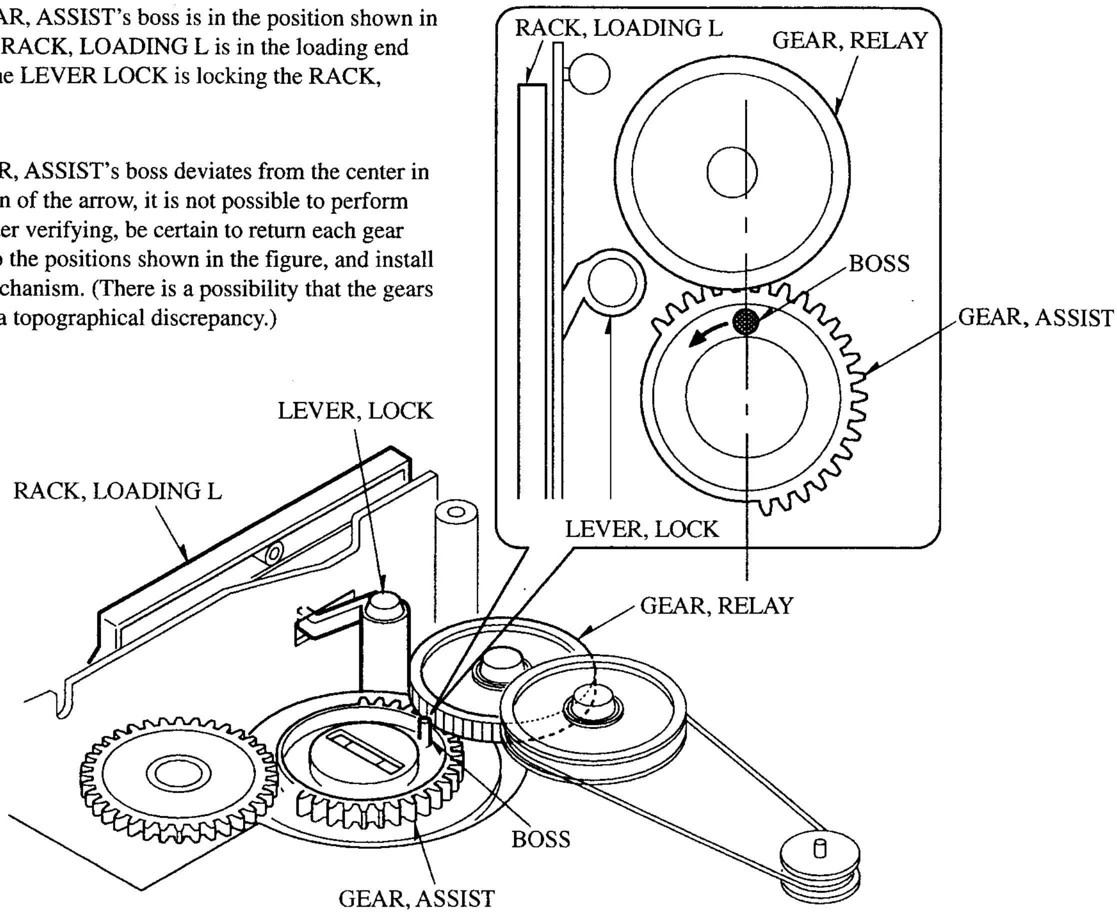

RACK, LOADING L
GEAR, RELAY
BOSS
GEAR, ASSIST
LEVER, LOCK
LEVER, LOCK
RACK, LOADING L
GEAR, RELAY
BOSS
GEAR, ASSIST

Fig. 9

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

IC

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	87-A20-186-010		IC,LA9240M
	87-A20-187-010		IC,LC78622E
	87-A20-157-010		IC,TA2092N
	87-001-536-010		IC,NJM78M05FA
	87-001-982-010		IC,TA7291S
	87-020-903-010		IC,NJM7805FA
	87-CE1-621-010		IC,LC866432V-5D27<U>
	87-CE1-661-010		IC,LC866448W-5E62<EZ>
	87-A20-458-010		IC,STK-405-050R
	87-017-738-010		IC,NJM2068LD
	87-002-727-010		IC,NJM4558L
	87-001-874-010		IC,HA12134A
	87-001-607-080		C-IC,NJM4558M
	87-070-282-010		IC,BU2092
	87-027-666-010		IC,TC4052BP
	87-017-915-080		IC,BU4094BCF
	87-A20-056-010		IC,BA3880S
	87-070-337-010		IC,BH3854S
	87-A20-442-040		C-IC,TC74HC07AF
	87-070-127-110		IC,LC72131D
	87-017-714-110		IC,LA1836L
	87-070-246-010		IC,GP1U271X
	87-CC1-615-010		IC,M38198MC-094FP
	87-001-551-080		C-IC,TC7S08F
	87-001-585-080		C-IC,TC7S32F
	87-001-982-010		IC,TA7291S
	87-A20-014-010		C-IC,CXA1981Q/AR
	87-A20-397-010		C-IC,CXD2535CR
	87-A20-398-010		C-IC,CXD2536R
	87-017-920-040		C-IC,HM51V4400
	86-CD0-601-010		C-IC,CXP81952
	87-A20-496-040		C-IC,MPC17A38ZVEL
	87-017-360-080		C-IC,SC7S04F
	87-002-465-080		C-IC,TC74HC368AF
	87-A20-401-040		C-IC,AK4504VF
	87-017-945-040		C-IC,NJM2112
	87-001-792-080		C-IC,NJM2100M
	87-017-984-080		C-IC,TK11230
	84-HM1-622-040		IC,CXA8027N
	87-020-454-010		IC,DN6851
⚠	87-001-196-010		ICP-N10<U>
	87-A20-440-040		IC,BU1920FS<EZ>

TRANSISTOR

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	87-026-463-080		TR,2SA933SRS
	87-026-297-080		C-TR,DTA144TK
	87-026-239-080		C-TR,DTC114TK
	89-109-521-080		TR,2SA952K
	89-318-155-080		TR,2SC1815GR
	89-213-702-010		TR,2SB1370E
	87-026-610-080		TR,KTC3198GR
	87-026-609-080		TR,KTA1266GR
	89-332-665-080		TR,2SC3266GR<EZ>
	89-327-125-080		C-TR,2SC2712GR
	89-327-124-080		C-TR,2SC2712Y
	87-A30-047-080		TR,CSD655E
	89-502-465-080		FET,2SK246GR
	87-026-210-080		C-TR,DTC144EK
	87-026-211-080		C-TR,DTA144EK
	89-232-654-080		C-TR,2SC3265Y
	89-320-011-080		TR,2SC2001K
	87-026-226-080		C-TR,DTA143EK
	89-111-625-080		C-TR,2SA1162GR
	87-026-238-080		C-TR,DTC144WK
	89-112-965-080		TR,2SA1296GR
	87-026-228-080		C-TR,DTA124EK
	87-026-233-080		C-TR,DTA114TK
	87-026-214-080		TR,DTA114YS
	87-026-213-080		C-TR,DTC114YK<EZ>
	89-327-143-080		C-TR,2SC2714O
	87-026-227-080		C-TR,DTA114EK
	89-505-434-540		C-FET,2SK543-TB(4/5)
	87-026-423-080		C-TR,RN2305
	89-341-165-080		C-TR,2SC4116GR
	89-115-884-080		C-TR,2SA1588Y
	89-112-134-080		C-TR,2SA1213YZ1
	87-A30-056-080		C-FET,2SJ278
	87-A30-057-080		C-FET,2SK1764
	89-420-053-010		TR,2SD2005R
	87-026-269-080		TR,DTA114ES<EZ>
	87-421-141-280		C-TR,2SD2114KU<EZ>
	87-026-486-080		TR,DTA144TS<EZ>

DIODE

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	87-020-465-080		DIODE,1SS133
	87-A40-115-060		DIODE,RS603M
	87-070-274-080		DIODE,1N4003 SEM
	87-020-027-080		C-DIODE,1SS184
	87-017-174-080		ZENER,HZS11A3L
	87-017-147-080		ZENER,HZS33-2
	87-017-091-080		ZENER,HZS5C1
	87-001-731-080		ZENER,HZS6C2L
	87-020-125-080		C-DIODE,1SS181
	87-001-559-080		DIODE,1SS131
	87-017-164-080		ZENER,HZS9A2L
	87-020-465-080		DIODE,1SS133
	87-017-076-080		ZENER,HZS3C3
	87-A40-197-080		ZENER,UZL6L1
	87-A40-256-080		DIODE,RB441Q-40<U>
	87-017-850-080		C-DIODE,DAP222
	87-A40-124-080		C-DIODE,RB501V-40
	87-020-575-080		C-ZENER,02CZ2.4Z
	87-017-948-080		C-DIODE,U1FMJ44N
	87-002-419-080		C-DIODE,U1BC44
	87-020-465-080		DIODE,1SS133

MAIN C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	87-033-220-010		PIN DIAI COATING
C101	87-010-399-090		CAP,E 3300-35 M SME
C102	87-010-399-090		CAP,E 3300-35 M SME
C103	87-010-196-080		C-CAP,S 0.1-25 Z F
C104	87-010-196-080		C-CAP,S 0.1-25 Z F
C105	87-010-196-080		C-CAP,S 0.1-25 Z F
C106	87-010-196-080		C-CAP,S 0.1-25 Z F
C107	87-010-453-090		CAP,E 4700-25 M SME
C108	87-010-196-080		C-CAP,S 0.1-25 Z F
C109	87-010-196-080		C-CAP,S 0.1-25 Z F
C110	87-010-196-080		C-CAP,S 0.1-25 Z F
C111	87-010-196-080		C-CAP,S 0.1-25 Z F
C112	87-012-140-080		C-CAP,S 470P-50 J CH
C113	87-010-235-080		CAP,E 470-16 SME
C114	87-010-235-080		CAP,E 470-16 SME
C115	87-010-403-080		CAP,E 3.3-50 M SME
C116	87-010-384-080		CAP,E 100-25 M SME
C117	87-010-384-080		CAP,E 100-25 M SME
C118	87-010-764-080		CAP,E 47-63 M VX
C119	87-010-263-080		CAP,E 100-10 SME
C120	87-010-940-090		CAP,E 0.01F-16N M SME
C121	87-015-997-090		CAP,E 2200-16 M SME
C122	87-010-403-080		CAP,E 3.3-50 M SME
C180	87-015-785-080		C-CAP, 0.1-25 ZF
C185	87-010-197-080		C-CAP,S 0.01-25 KB
C186	87-015-819-080		C-CAP, 0.01-50 KB
C187	87-018-134-080		CAP,TC U 0.01-16 NY UP050<EZ>
C188	87-010-197-080		C-CAP,S 0.01-25 KB<EZ>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C189	87-010-197-080		C-CAP,S 0.01-25 KB<EZ>
C190	87-010-197-080		C-CAP,S 0.01-25 KB<EZ>
C191	87-010-197-080		C-CAP,S 0.01-25 KB<EZ>
C193	87-018-134-080		CAP,TC U 0.01-16 NY UP050<U>
C194	87-012-157-080		C-CAP,S 330P-50 J CH GRM<EZ>
C195	87-012-157-080		C-CAP,S 330P-50 J CH GRM<EZ>
C197	87-018-115-080		C-CAP,TC U 47P-CH<EZ>
C198	87-018-115-080		C-CAP,TC U 47P-CH<EZ>
C201	87-010-402-080		CAP,E 2.2-50 M SME
C202	87-010-402-080		CAP,E 2.2-50 M SME
C203	87-010-405-080		CAP,E 10-50 M SME
C204	87-010-405-080		CAP,E 10-50 M SME
C205	87-010-149-080		C-CAP,S 5P-50 CH
C206	87-010-149-080		C-CAP,S 5P-50 CH
C207	87-010-195-080		C-CAP,S 0.068-25 K F
C208	87-010-195-080		C-CAP,S 0.068-25 K F
C209	87-010-195-080		C-CAP,S 0.068-25 K F
C210	87-010-195-080		C-CAP,S 0.068-25 K F
C211	87-018-205-080		CAP,TC U 0.022-25 Z F TP
C215	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C216	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C217	87-010-247-080		CAP,E 100-50 M SME
C231	87-010-404-080		CAP,E 4.7-50 M SME
C232	87-010-404-080		CAP,E 4.7-50 M SME
C233	87-010-176-080		C-CAP,S 680P-50 J SL
C234	87-010-176-080		C-CAP,S 680P-50 J SL
C235	87-012-140-080		C-CAP,S 470P-50 J CH
C236	87-012-140-080		C-CAP,S 470P-50 J CH
C237	87-010-544-080		CAP,E 0.1-50 M SME
C238	87-010-544-080		CAP,E 0.1-50 M SME
C301	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C302	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C303	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C304	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C305	87-010-189-080		C-CAP,S 8200P-50 K B
C306	87-010-189-080		C-CAP,S 8200P-50 K B
C307	87-010-189-080		C-CAP,S 8200P-50 K B
C308	87-010-189-080		C-CAP,S 8200P-50 K B
C309	87-010-197-080		C-CAP,S 0.01-25 K B
C311	87-010-197-080		C-CAP,S 0.01-25 K B
C313	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C314	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C321	87-010-196-080		C-CAP,S 0.1-25 Z F
C333	87-012-349-080		C-CAP,S 1000P-50 J CH
C334	87-012-349-080		C-CAP,S 1000P-50 J CH<EZ>
C335	87-010-197-080		C-CAP,S 0.01-25 K B
C336	87-010-260-080		CAP,E 47-25 SME
C337	87-010-183-080		C-CAP,S 2700P-50 K B
C338	87-010-183-080		C-CAP,S 2700P-50 K B
C339	87-010-183-080		C-CAP,S 2700P-50 K B
C341	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C342	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C351	87-010-402-080		CAP,E 2.2-50 M SME
C352	87-010-402-080		CAP,E 2.2-50 M SME
C353	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C354	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C355	87-010-182-080		C-CAP,S 2200P-50 K B
C356	87-010-182-080		C-CAP,S 2200P-50 K B
C357	87-010-197-080		C-CAP,S 0.01-25 K B
C358	87-010-197-080		C-CAP,S 0.01-25 K B
C359	87-010-189-080		C-CAP,S 8200P-50 K B
C360	87-010-189-080		C-CAP,S 8200P-50 K B
C361	87-010-184-080		C-CAP,S 3300P-50 K B
C362	87-010-184-080		C-CAP,S 3300P-50 K B
C363	87-010-401-080		CAP,E 1-50 M SME
C364	87-010-401-080		CAP,E 1-50 M SME
C385	87-010-196-080		C-CAP,S 0.1-25 Z F
C386	87-010-318-080		C-CAP,S 47P-50 J CH
C387	87-010-197-080		C-CAP,S 0.01-25 K B
C389	87-010-402-080		CAP,E 2.2-50 M SME
C390	87-010-196-080		C-CAP,S 0.1-25 Z F
C391	87-010-184-080		C-CAP,S 3300P-50 K B
C398	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C399	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C401	87-016-081-080		C-CAP,S 0.1-16 KR
C402	87-016-081-080		C-CAP,S 0.1-16 KR
C403	87-012-155-080		C-CAP,S 180P-50 J CH GRM
C404	87-012-155-080		C-CAP,S 180P-50 J CH GRM
C405	87-012-142-080		C-CAP,S 0.33-16 Z F
C406	87-012-142-080		C-CAP,S 0.33-16 Z F
C407	87-012-349-080		C-CAP,S 1000P-50 J CH
C408	87-012-349-080		C-CAP,S 1000P-50 J CH
C409	87-010-545-080		CAP,E 0.22-50 M SME
C410	87-010-545-080		CAP,E 0.22-50 M SME
C412	87-010-371-080		CAP,E 470-6.3 M SME
C413	87-016-081-080		C-CAP,S 0.1-16 KR
C501	87-010-404-080		CAP,E 4.7-50 M SME
C502	87-010-404-080		CAP,E 4.7-50 M SME
C503	87-010-318-080		C-CAP,S 47P-50 J CH
C504	87-010-318-080		C-CAP,S 47P-50 J CH
C505	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C506	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C509	87-010-405-080		CAP,E 10-50 M SME
C510	87-010-405-080		CAP,E 10-50 M SME
C511	87-010-381-080		CAP,E 330-16 SME
C540	87-010-196-080		C-CAP,S 0.1-25 Z F
C541	87-010-196-080		C-CAP,S 0.1-25 Z F
C542	87-010-405-080		CAP,E 10-50 M SME
C543	87-010-546-080		CAP,E 0.33-50 SME
C544	87-010-546-080		CAP,E 0.33-50 SME
C547	87-015-883-080		C-CAP,S 0.022-25 K B<U>
C547	87-010-213-080		C-CAP,S 0.015-25 K B<EZ>
C548	87-015-883-080		C-CAP,S 0.022-25 K B<U>
C548	87-010-213-080		C-CAP,S 0.015-25 K B<EZ>
C551	87-010-177-080		C-CAP,S 820P-50 J SL
C552	87-010-177-080		C-CAP,S 820P-50 J SL
C553	87-010-178-080		C-CAP,S 1000P-50 K B
C554	87-010-178-080		C-CAP,S 1000P-50 K B
C555	87-010-805-080		C-CAP,S 1-16 Z F
C556	87-010-805-080		C-CAP,S 1-16 Z F
C557	87-010-405-080		CAP,E 10-50 M SME
C558	87-010-405-080		CAP,E 10-50 M SME
C559	87-010-805-080		CAP,S 1-16 Z F
C560	87-010-805-080		CAP,S 1-16 Z F
C583	87-012-153-080		C-CAP,S 120P-50 CH
C584	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C585	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C586	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C587	87-010-381-080		CAP,E 330-16 SME
C591	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C592	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C593	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C594	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C595	87-010-196-080		C-CAP,S 0.1-25 Z F
C596	87-010-178-080		C-CAP,S 1000P-50 K B
C600	87-010-553-040		CAP,E 47-16 GAS
C601	87-010-178-080		C-CAP,S 1000P-50 K B
C602	87-010-178-080		C-CAP,S 1000P-50 KB
C603	87-010-405-080		CAP,E 10-50 M SME
C604	87-010-405-080		CAP,E 10-50 M SME
C605	87-010-260-080		CAP,E 47-25 SME
C606	87-010-101-080		CAP,E 220-16 SME
C607	87-010-188-080		C-CAP,S 6800P-50 K B
C608	87-010-188-080		C-CAP,S 6800P-50 K B
C609	87-018-127-080		CAP,TC U 470P-50 K B UP050
C610	87-018-127-080		CAP,TC U 470P-50 K B UP050
C611	87-010-197-080		C-CAP,S 0.01-25 K B
C612	87-010-197-080		C-CAP,S 0.01-25 K B
C613	87-010-195-080		C-CAP,S 0.068-25 K F
C614	87-010-195-080		C-CAP,S 0.068-25 K F

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C615	87-010-404-080		CAP,E 4.7-50 M SME
C616	87-010-404-080		CAP,E 4.7-50 M SME
C617	87-010-404-080		CAP,E 4.7-50 M SME
C618	87-010-404-080		CAP,E 4.7-50 M SME
C631	87-010-404-080		CAP,E 4.7-50 M SME
C632	87-010-404-080		CAP,E 4.7-50 M SME
C633	87-010-260-080		CAP,E 47-25 SME
C634	87-016-081-080		C-CAP,S 0.1-16 KR
C635	87-016-081-080		C-CAP,S 0.1-16 KR
C636	87-016-081-080		C-CAP,S 0.1-16 KR
C637	87-016-081-080		C-CAP,S 0.1-16 KR
C638	87-010-176-080		C-CAP,S 680P-50 J SL
C639	87-010-176-080		C-CAP,S 680P-50 J SL
C640	87-010-403-080		CAP,E 3.3-50 M SME
C641	87-010-403-080		CAP,E 3.3-50 M SME
C642	87-010-248-080		CAP,E 220-10 SME
C643	87-010-403-080		CAP,E 3.3-50 M SME
C644	87-012-141-080		C-CAP,S 0.22-16 Z F
C645	87-015-883-080		C-CAP,0.022-25 K B
C646	87-010-382-080		CAP,E 22-25 M SME
C647	87-010-263-080		CAP,E 100-10 SME
C670	87-010-404-080		CAP,E 4.7-50 M SME
C671	87-010-404-080		CAP,E 4.7-50 M SME
C701	87-010-381-080		CAP,E 330-16 SME
C702	87-010-404-080		CAP,E 4.7-50 M SME
C703	87-010-197-080		C-CAP,S 0.01-25 K B
C704	87-010-197-080		C-CAP,S 0.01-25 K B
C711	87-010-263-080		CAP,E 100-10 SME
C712	87-010-196-080		C-CAP,S 0.1-25 Z F
C722	87-010-152-080		C-CAP,S 8P-50 D CH
C723	87-010-178-080		C-CAP,S 1000P-50 K B
C725	87-010-178-080		C-CAP,S 1000P-50 K B
C727	87-010-196-080		C-CAP,S 0.1-25 Z F
C728	87-010-248-080		CAP,E 220-10 SME
C735	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
C770	87-010-405-080		CAP,E 10-50 M SME
C771	87-010-405-080		CAP,E 10-50 M SME
C772	87-010-194-080		C-CAP,S 0.047-25 Z F
C773	87-010-196-080		C-CAP,S 0.1-25 Z F
C774	87-010-263-080		CAP,E 100-10 SME
C775	87-010-405-080		CAP,E 10-50 M SME
C776	87-010-197-080		C-CAP,S 0.01-25 K B
C777	87-010-400-080		CAP,E 0.47-50 M SME
C778	87-010-401-080		CAP,E 1-50 M SME
C779	87-010-401-080		CAP,E 1-50 M SME
C780	87-010-197-080		C-CAP,S 0.01-25 K B
C781	87-010-405-080		CAP,E 10-50 M SME
C782	87-010-405-080		CAP,E 10-50 M SME<U>
C782	87-010-197-080		C-CAP,S 0.01-25 KR<EZ>
C785	87-010-197-080		C-CAP,S 0.01-25 K B
C787	87-010-184-080		C-CAP,S 3300P-50 K B
C788	87-010-184-080		C-CAP,S 3300P-50 K B
C789	87-010-179-080		C-CAP,S 1200P-50 K B
C790	87-010-179-080		C-CAP,S 1200P-50 K B
C791	87-010-401-080		CAP,E 1-50 M SME
C792	87-010-180-080		C-CAP,S 1500P-50 K B<U>
C792	87-010-182-080		C-CAP,S 2200P-50 K B<EZ>
C793	87-010-189-080		C-CAP,S 8200P-50 K B
C794	87-010-408-080		CAP,E 47-50 SME
C795	87-010-194-080		C-CAP,S 0.047-25 Z F
C796	87-010-403-080		CAP,E 3.3-50 M SME
C802	87-010-197-080		C-CAP,S 0.01-25 K B
C803	87-018-134-080		CAP,TC-U 0.01-16 NY UP050
C814	87-010-196-080		C-CAP,S 0.1-25 Z F
C815	87-018-134-080		CAP,TC-U 0.01-16 NY UP050<U>
C817	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>
C818	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>
C819	87-010-197-080		C-CAP,S 0.01-25 K B<U>
C820	87-010-408-080		CAP,E 47-50 SME
C821	87-010-197-080		C-CAP,S 0.01-25 K B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C823	87-010-197-080		C-CAP,S 0.01-25 K B
C828	87-010-197-080		C-CAP,S 0.01-25 K B
C829	87-010-197-080		C-CAP,S 0.01-25 K B
C830	87-015-819-080		C-CAP,0.01-50 K B
C835	87-010-197-080		C-CAP,S 0.01-25 K B
C860	87-010-248-080		CAP,E 220-10 SME<EZ>
C861	87-010-196-080		C-CAP,S 0.1-25 ZF<EZ>
C862	87-010-182-080		C-CAP,S 2200P-50 K B<EZ>
C863	87-010-178-080		C-CAP,S 1000P-50 KB<EZ>
C864	87-010-315-080		C-CAP,S 27P-50 J CH<EZ>
C865	87-010-315-080		C-CAP,S 27P-50 J CH<EZ>
C866	87-010-197-080		C-CAP,S 0.01-25 KR<EZ>
C867	87-012-145-080		C-CAP,S 270P-50 J CH<EZ>
C868	87-010-405-080		CAP,E 10-50 M SME<EZ>
C872	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>
C901	87-010-197-080		C-CAP,S 0.01-25 K B
C902	87-015-785-080		C-CAP, 0.1-25 Z F
C903	87-018-119-080		CAP,TC U 100P-50 K B UP050
C942	87-010-154-080		C-CAP,S 10P-50 D CH<EZ>
C946	87-010-401-080		CAP,E 1-50 M SME
C949	87-014-049-080		CAP,PP 470P-100 J<EZ>
C952	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>
C957	87-010-315-080		C-CAP,S 27P-50 J CH<EZ>
C958	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>
C960	87-010-196-080		C-CAP,S 0.1-25 Z F
C961	87-010-152-080		C-CAP,S 8P-50 D CH<U>
C987	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
C990	87-010-197-080		C-CAP,S 0.01-25 K B
C993	87-018-134-080		CAP,TC U 0.01-16 N Y UP050
C995	87-010-197-080		C-CAP,S 0.01-25 K B
C999	87-010-196-080		C-CAP,S 0.1-25 Z F
CF801	87-008-261-010		FLTR,CFSFE10.7MA5<U>
CF801	87-008-423-080		FLTR,SFE10.7S3GH-A-TF21<EZ>
CF802	87-008-261-010		FLTR,CFSFE10.7MA5<U>
CF802	82-785-747-080		CF,MS2 GHY,R<EZ>
FC103	88-907-151-110		FF-CABLE,7P 1.25 150MM
FB125	87-008-372-080		FLTR,EMIBL01 RN1<U>
FB127	87-008-372-080		FLTR,EMIBL01 RN1<U>
FC104	87-CE1-633-010		FF-CABLE,14P -1.0 400MM
FFE801	A8-6ZA-194-030		6ZA-1 YFEUNM<U>
FFE801	A8-6ZA-195-030		6ZA-1 YFEENM<EZ>
J201	87-009-216-010		JACK,3.5 BLK ST W/SW
J202	87-099-801-010		JACK,PIN 1P BLK W/O SW
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)
J501	80-MT3-616-010		JACK,PIN 2P (*)
J801	87-A60-202-010		TERMINAL,ANT 4P MSP-154V-02<U>
J801	87-033-241-010		TERMINAL,ANT 2P AJ-2039<EZ>
L101	87-003-383-010		COIL,1UH K<EZ>
L102	87-003-383-010		COIL,1UH K<EZ>
L211	87-003-143-080		COIL,4.7UH K LAL02<U>
L212	87-003-143-080		COIL,4.7UH K LAL02<U>
L310	87-003-143-080		COIL,4.7UH K LAL02<U>
L331	87-007-342-010		COIL,OSC 85KHZ BIAS
L351	82-231-622-080		COIL,22MH J TL08
L352	82-231-622-080		COIL,22MH J TL08
L353	87-003-131-080		COIL,10MH J EL0607
L354	87-003-131-080		COIL,10MH J EL0607
L701	87-A50-027-010		COIL,1 POLE MPX(TOK)
L702	87-A50-027-010		COIL,1 POLE MPX(TOK)
L721	87-003-102-080		COIL,10UH K LAL02<EZ>
L741	87-A50-015-010		COIL,FM DET (TOK)
L742	87-A90-051-010		FLTR, CFAZ-450 (TOK)
L743	87-005-564-080		C-COIL,2125 2.2UH
L770	87-003-102-080		COIL,10UH K LAL02
L832	87-005-847-080		COIL,2.2UH K CECS
L941	87-A50-020-010		COIL,ANT LW(COI) 252KHZ<EZ>
L942	87-A50-019-010		COIL,OSC LW(COI) 856KHZ<EZ>
L850	87-005-847-080		COIL,2.2UH K CECS<EZ>
L981	86-NF4-665-010		COIL,AM PACK 1(TOK)
PN101	87-064-122-010		HLDR,WIRE 2.5-10P

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
⚠ PR143	87-026-681-080		PROTECTOR,5A 491 SERIES 60V<EZ>
⚠ PR146	87-026-681-080		PROTECTOR,5A 491 SERIES 60V<EZ>
R121	87-022-050-080		RES,M/F 0.22-1W J
R122	87-022-050-080		RES,M/F 0.22-1W J
SFR301	87-024-168-080		SFR,1K H RH0638C
SFR302	87-024-168-080		SFR,1K H RH0638C
SFR331	87-024-175-080		SFR,47K H RH0638C
SFR332	87-024-175-080		SFR,47K H RH0638C
SFR351	87-024-168-080		SFR,1K H RH0638C
SFR352	87-024-168-080		SFR,1K H RH0638C
SFR722	87-024-352-080		SFR,4.7K H EVN DJAA03
TC701	87-011-253-080		TRIMMER,CER 30P 4.0X4.5 ECRLA
TC942	87-011-221-080		TRIMMER,CER 30P 6.15X5.9 VCT51<EZ>
VR651	87-A90-153-010		VR,RTRY 50KBX2 V
W101	87-CE1-632-010		F-CABLE,10P -2.5 PT
X703	84-508-618-010		VIB,CER CSB 456 F15
X721	87-030-372-010		VIB,XTAL 7.200MHZ CSA-309
X850	89-KT1-608-010		X,TAL 4.332MHZ<EZ>

FRONT-SYS C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C201	87-010-196-080		C-CAP,S 0.1-25 Z F
C202	87-012-145-080		C-CAP,S 270-50 CH
C203	87-010-196-080		C-CAP,S 0.1-25 Z F
C204	87-010-312-080		C-CAP,S 15P-50 J CH
C205	87-015-785-080		C-CAP, 0.1-25 ZF
C222	87-010-178-080		C-CAP,S 1000P-50 K B
C241	87-010-401-080		CAP,E 1-50 M SME
C242	87-010-370-080		CAP,E 330-6.3 M SME
C243	87-010-196-080		C-CAP,S 0.1-25 Z F
C244	87-010-401-080		CAP,E 1-50 M SME
C245	87-010-550-040		CAP,E 100-6.3 5L SRE
C256	87-010-404-080		CAP,E 4.7-50 M SME
C257	87-010-404-080		CAP,E 4.7-50 M SME
C258	87-010-392-080		CAP,E 33-35 M SME
C331	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C332	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C333	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C334	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C451	87-010-112-080		CAP,E 100-16 M SME
C452	87-010-197-080		C-CAP,S 0.01-25 K B
C501	87-010-197-080		C-CAP,S 0.01-25 K B
C531	87-010-178-080		C-CAP,S 1000P-50 K B
C601	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>
C602	87-010-178-080		C-CAP,S 1000P-50 K B<EZ>
CN451	88-802-092-020		CONN ASSY,9P RED
FC401	88-909-381-110		FF-CABLE,9P 1.25
FC452	88-904-331-110		FF-CABLE,4P 1.25 330MM
FL101	87-CE3-601-010		FL,BJ508GK<U>
FL101	87-CE3-603-010		FL,BJ544GK<EZ>
L201	87-A50-052-010		COIL,CLOCK 5.76MHZ T1
L211	87-003-142-080		COIL,3.3UH K LALOL
LED501	87-A40-276-080		LED,SML1816W UMB/GRN
LED503	87-A40-276-080		LED,SML1816W UMB/GRN
LED505	87-A40-276-080		LED,SML1816W UMB/GRN
LED507	87-A40-276-080		LED,SML1816W UMB/GRN
LED509	87-A40-276-080		LED,SML1816W UMB/GRN
LED511	87-001-161-080		LED,SEL2410E GRN
LED512	87-001-161-080		LED,SEL2410E GRN
LED513	87-001-161-080		LED,SEL2410E GRN
LED514	87-001-161-080		LED,SEL2410E GRN
LED515	87-001-161-080		LED,SEL2410E GRN
LED516	87-002-738-080		LED,SEL2210R-TP6 RED
SW301	87-A90-095-080		SW,TACT EVQ11G04M
SW302	87-A90-095-080		SW,TACT EVQ11G04M
SW303	87-A90-095-080		SW,TACT EVQ11G04M
SW304	87-A90-095-080		SW,TACT EVQ11G04M
SW305	87-A90-095-080		SW,TACT EVQ11G04M
SW306	87-A90-095-080		SW,TACT EVQ11G04M
SW307	87-A90-095-080		SW,TACT EVQ11G04M
SW308	87-A90-095-080		SW,TACT EVQ11G04M
SW309	87-A90-095-080		SW,TACT EVQ11G04M
SW310	87-A90-095-080		SW,TACT EVQ11G04M
SW311	87-A90-095-080		SW,TACT EVQ11G04M
SW312	87-A90-095-080		SW,TACT EVQ11G04M
SW313	87-A90-095-080		SW,TACT EVQ11G04M
SW314	87-A90-095-080		SW,TACT EVQ11G04M
SW315	87-A90-095-080		SW,TACT EVQ11G04M
SW316	87-A90-095-080		SW,TACT EVQ11G04M
SW331	87-A90-348-010		SW,RTRY 1-2-24 EVQVEMF0324B
SW332	87-A90-348-010		SW,RTRY 1-2-24 EVQVEMF0324B

FRONT-MD C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C891	87-010-178-080		C-CAP,S 1000P-50 K B
C892	87-010-320-080		C-CAP,S 68P-50 CH
C893	87-010-196-080		C-CAP,S 0.1-25 Z F
C894	87-010-405-080		CAP,E 10-50 M SME
C896	87-010-178-080		C-CAP,S 1000P-50 K B
C897	87-010-315-080		C-CAP,S 27P-50 J CH
C898	87-010-197-080		C-CAP,S 0.01-25 KB
C902	87-010-197-080		C-CAP,S 0.01-25 K B
C903	87-010-405-080		CAP,E 10-50 M SME
C904	87-A10-189-040		CAP,E 220-10 M
C905	87-A10-189-040		CAP,E 220-10 M
C906	87-A10-189-040		CAP,E 220-10 M
C909	87-010-405-080		CAP,E 10-50 M SME
C910	87-012-140-080		C-CAP,S 470P-50 J CH
C911	87-012-140-080		C-CAP,S 470P-50 J CH
C912	87-012-140-080		C-CAP,S 470P-50 J CH
C913	87-012-140-080		C-CAP,S 470P-50 J CH
C914	87-012-140-080		C-CAP,S 470P-50 J CH
C915	87-012-140-080		C-CAP,S 470P-50 J CH
C916	87-012-140-080		C-CAP,S 470P-50 J CH
C917	87-012-140-080		C-CAP,S 470P-50 J CH
C918	87-012-140-080		C-CAP,S 470P-50 J CH
C919	87-012-140-080		C-CAP,S 470P-50 J CH
C920	87-012-140-080		C-CAP,S 470P-50 J CH
C921	87-012-140-080		C-CAP,S 470P-50 J CH
C922	87-012-140-080		C-CAP,S 470P-50 J CH
C923	87-012-140-080		C-CAP,S 470P-50 J CH
C924	87-012-140-080		C-CAP,S 470P-50 J CH
C925	87-012-140-080		C-CAP,S 470P-50 J CH
C926	87-010-322-080		C-CAP,S 100P-50 J CH
C927	87-010-322-080		C-CAP,S 100P-50 J CH
C928	87-010-322-080		C-CAP,S 100P-50 J CH
C929	87-010-322-080		C-CAP,S 100P-50 J CH
C930	87-010-178-080		C-CAP,S 1000P-50 K B
C931	87-010-178-080		C-CAP,S 1000P-50 K B
C932	87-010-197-080		C-CAP,S 0.01-25 K B
C933	87-010-196-080		C-CAP,S 0.1-25 Z F
C934	87-010-196-080		C-CAP,S 0.1-25 Z F
FC101	87-CE1-640-010		FF-CABLE,16P -1.0 250MM
FC102	87-CE1-634-010		FF-CABLE,16P -1.0 320MM
FL901	87-CC1-608-010		FL,CM1532C
L901	87-003-149-080		COIL,47UH K LAL02
SW891	87-A90-095-080		SW,TACT EVQ11G04M
SW892	87-A90-095-080		SW,TACT EVQ11G04M
SW893	87-A90-095-080		SW,TACT EVQ11G04M
SW901	87-CC1-607-010		SW,RTRY 1-2-24 PUSH
SW902	87-A90-095-080		SW,TACT EVQ11G04M
SW903	87-A90-095-080		SW,TACT EVQ11G04M
SW911	87-A90-095-080		SW,TACT EVQ11G04M
X901	87-008-497-080		VIB,CER 7.68MHZ CST MTW

CD C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
	87-033-220-010		PIN,DIA1 COATING
C1	87-010-403-080		CAP,E 3.3-50 M SME
C2	87-010-197-080		C-CAP,S 0.01-25 K B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C3	87-010-263-080		CAP,E 100-10 SME
C4	87-010-248-080		CAP,E 220-10 SME
C5	87-010-197-080		C-CAP,S 0.01-25 K B
C6	87-010-374-080		CAP,E 47-10 M SME
C7	87-012-349-080		C-CAP,S 1000P-50 J CH
C8	87-010-198-080		C-CAP,S 0.022-25 K B
C9	87-010-263-080		CAP,E 100-10 SME
C10	87-010-263-080		CAP,E 100-10 SME
C12	87-010-401-080		CAP,E 1-50 M SME
C13	87-010-197-080		C-CAP,S 0.01-25 K B
C14	87-010-405-080		CAP,E 10-50 M SME
C16	87-010-545-080		CAP,E 0.22-50 M SME
C17	87-012-157-080		C-CAP,S 330P-50 J CH GRM
C18	87-010-213-080		C-CAP,S 0.015-25 K B
C20	87-010-193-080		C-CAP,S 0.033-25 K F
C22	87-010-180-080		C-CAP,S 1500P-50 K B
C23	87-010-194-080		C-CAP,S 0.047-25 Z F
C29	87-010-186-080		C-CAP,S 4700P-50 K B
C30	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C31	87-010-545-080		CAP,E 0.22-50 M SME
C32	87-010-374-080		CAP,E 47-10 M SME
C33	87-010-401-080		CAP,E 1-50 M SME
C34	87-010-184-080		C-CAP,S 3300P-50 K B
C35	87-010-197-080		C-CAP,S 0.01-25 K B
C36	87-010-374-080		CAP,E 47-10 M SME
C37	87-010-404-080		CAP,E 4.7-50 M SME
C38	87-010-196-080		C-CAP,S 0.1-25 Z F
C39	87-012-349-080		C-CAP,S 1000P-50 J CH
C40	87-010-147-080		C-CAP,S 3P-50 C CH GRM
C42	87-010-312-080		C-CAP,S 15P-50 J CH
C45	87-010-196-080		C-CAP,S 0.1-25 Z F
C46	87-010-196-080		C-CAP,S 0.1-25 Z F
C47	87-010-196-080		C-CAP,S 0.1-25 Z F
C48	87-010-315-080		C-CAP,S 27P-50 J CH
C50	87-012-140-080		C-CAP,S 470P-50 J CH
C57	87-010-316-080		C-CAP,S 33P-50 J CH
C58	87-010-316-080		C-CAP,S 33P-50 J CH
C59	87-010-263-080		CAP,E 100-10 SME
C60	87-010-196-080		C-CAP,S 0.1-25 Z F
C61	87-010-196-080		C-CAP,S 0.1-25 Z F
C62	87-010-370-080		CAP,E 330-6.3 M SME
C65	87-010-404-080		CAP,E 4.7-50 M SME
C66	87-010-196-080		C-CAP,S 0.1-25 Z F
C67	87-010-263-080		CAP,E 100-10 SME
C68	87-010-322-080		C-CAP,S 100P-50 J CH
C75	87-010-197-080		C-CAP,S 0.01-25 K B
C76	87-010-236-080		CAP,E 1000-10 M SME
C77	87-010-263-080		CAP,E 100-10 SME
C78	87-010-197-080		C-CAP,S 0.01-25 K B
C79	87-010-197-080		C-CAP,S 0.01-25 K B
C80	87-010-112-080		CAP,E 100-16 M SME
C81	87-010-405-080		CAP,E 10-50 M SME
C82	87-010-405-080		CAP,E 10-50 M SME
C83	87-010-181-080		C-CAP,S 1800P B K
C84	87-010-181-080		C-CAP,S 1800P B K
C90	87-010-197-080		C-CAP,S 0.01-25 K B
C91	87-010-404-080		CAP,E 4.7-50 M SME
C92	87-010-221-080		CAP,E 470-10 M SME
C93	87-018-134-080		CAP,TC U 0.01-16NY
C94	87-018-134-080		CAP,TC U 0.01-16NY
C95	87-010-197-080		C-CAP,S 0.01-25 K B
C96	87-010-221-080		CAP,E 470-10 M SME
C97	87-010-197-080		C-CAP,S 0.01-25 K B
C98	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C101	87-010-322-080		C-CAP,S 100P-50 J CH
C102	87-010-322-080		C-CAP,S 100P-50 J CH
C103	87-010-322-080		C-CAP,S 100P-50 J CH
C104	87-010-322-080		C-CAP,S 100P-50 J CH
C105	87-010-322-080		C-CAP,S 100P-50 J CH
CN1	88-802-081-290		CONN ASSY,8P

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CN2	88-802-081-220		CONN ASSY,8P
CN3	88-802-063-030		CONN ASSY,6P CDME
CN6	88-802-053-040		CONN ASSY,5P CD TRY
L1	87-003-102-080		COIL,10UH K LAL02
X1	87-030-270-080		VIB,XTAL 16.9344MHZ HC-49/U03

PT1 C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
⚠	82-304-743-010		TERMINAL,1P
⚠ CF101	87-A90-160-080		FUSE CLAMP,FC 51F
⚠ CF102	87-A90-160-080		FUSE CLAMP,FC 51F
⚠ F101	87-035-484-010		FUSE,1.6A 125V T 237<U>
⚠ F101	87-035-413-010		FUSE,1.6A 250V T 239<EZ>
⚠ PT101	87-CE1-639-010		PT,U<U>
⚠ PT101	87-CE1-636-010		PT,E<EZ>
⚠ R199	88-140-225-080		RES,2.2M-1/2W<U>

PT2 C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C192	87-018-134-080		CAP,TC U 0.01-16 NY UP050<EZ>
⚠ CF121	87-033-213-080		FUSE CLAMP,PFC5000<EZ>
⚠ CF122	87-033-213-080		FUSE CLAMP,PFC5000<EZ>
⚠ F201	87-035-192-010		FUSE,4A 250V T 218<EZ>
PN102	87-064-122-010		HLDR,WIRE 2.5P-10P
⚠ PR101	87-A90-113-080		PROTECTOR,4A 251<U>
⚠ PR101	87-A90-094-080		PROTECTOR,4A 491 SERUES<EZ>
⚠ PR111	87-026-681-080		PROTECTOR,5A 491 SERIES<EZ>

MD MAIN C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C700	87-018-134-080		CAP,TC U 0.01-16NY
C701	87-016-462-080		C-CAP,S 1-16 Z F
C702	87-012-286-080		C-CAP,U 0.01-25 K B
C703	87-012-274-080		C-CAP,U 1000P-50 K B
C704	87-010-787-080		C-CAP,U 0.022-25 K B
C705	87-010-662-080		C-CAP,E 22-6.3 M MV
C706	87-010-662-080		C-CAP,E 22-6.3 M MV
C707	87-016-491-080		C-CAP,S 0.22-16 Z F C2021
C708	87-016-460-080		C-CAP,U 0.22-16 K B
C709	87-010-829-080		C-CAP,U 0.047-16 Z F
C710	87-016-462-080		C-CAP,S 1-16 Z F
C711	87-016-491-080		C-CAP,S 0.22-16 Z F C2021
C712	87-016-462-080		C-CAP,S 1-16 Z F
C713	87-012-284-080		C-CAP,U 6800P-50 K B GRM
C714	87-012-276-080		C-CAP,U 1500P-50 K B
C715	87-010-829-080		C-CAP,U 0.047-16 Z F
C716	87-010-662-080		C-CAP,E 22-6.3 M MV
C717	87-012-286-080		C-CAP,U 0.01-25 K B
C718	87-012-195-080		C-CAP,U 100P-50 J CH
C719	87-012-286-080		C-CAP,U 0.01-25 K B
C720	87-016-436-080		C-CAP,TN 47-4 B2
C721	87-010-662-080		C-CAP,E 22-6.3 M MV
C722	87-010-787-080		C-CAP,U 0.022-25 K B
C723	87-010-829-080		C-CAP,U 0.047-16 Z F
C724	87-010-662-080		C-CAP,E 22-6.3 M MV
C725	87-010-662-080		C-CAP,E 22-6.3 M MV
C726	87-010-831-080		C-CAP,U 0.1-16 Z F
C727	87-016-462-080		C-CAP,S 1-16 Z F
C728	87-012-276-080		C-CAP,U 1500P-50 K B
C730	87-012-196-080		C-CAP,U 120P-50 J CH
C731	87-010-787-080		C-CAP,U 0.022-25 K B
C732	87-016-462-080		C-CAP,S 1-16 Z F
C733	87-012-286-080		C-CAP,U 0.01-25 K B
C734	87-010-831-080		C-CAP,U 0.1-16 Z F
C735	87-012-195-080		C-CAP,U 100P-50 J CH
C736	87-012-279-080		C-CAP,U 2700P-50 K B GRM
C737	87-016-462-080		C-CAP,S 1-16 Z F
C738	87-010-831-080		C-CAP,U 0.1-16 Z F
C739	87-012-166-080		C-CAP,U 4P-50 CH
C740	87-012-166-080		C-CAP,U 4P-50 CH

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C741	87-010-831-080		C-CAP,U 0.1-16 Z F
C743	87-010-662-080		C-CAP,E 22-6.3 M MV
C744	87-A10-057-080		C-CAP,TN 100-4 M F95 E
C746	87-010-831-080		C-CAP,U 0.1-16 Z F
C747	87-016-462-080		C-CAP,S 1-16 Z F
C749	87-010-779-080		C-CAP,E 100-6.3 M MV
C750	87-010-464-080		C-CAP,E 220-4 MV
C751	87-010-252-010		C-CAP,E 1000-6.3 M SME
C752	87-010-464-080		C-CAP,E 220-4 MV
C753	87-010-779-080		C-CAP,E 100-6.3 M MV
C754	87-016-462-080		C-CAP,S 1-16 Z F
C755	87-010-831-080		C-CAP,U 0.1-16 Z F
C756	87-A10-222-040		CAP,AS 22-10 OS
C757	87-010-875-080		C-CAP,1000P-500 K W5R
C758	87-010-831-080		C-CAP,U 0.1-16 Z F
C759	87-010-831-080		C-CAP,U 0.1-16 Z F
C761	87-016-462-080		C-CAP,S 1-16 Z F
C762	87-016-462-080	0E	C-CAP,S 1-16 Z F
C763	87-010-831-080		C-CAP,U 0.1-16 Z F
C764	87-010-831-080		C-CAP,U 0.1-16 Z F
C766	87-010-831-080		C-CAP,U 0.1-16 Z F
C767	87-010-779-080		C-CAP,E 100-6.3 M MV
C768	87-010-662-080		C-CAP,E 22-6.3 M MV
C769	87-010-464-080		C-CAP,E 220-4
C786	87-A90-396-080		C-FLTR,EMINFM40R01C101
C788	87-010-831-080		C-CAP,U 0.1-16 Z F
C789	87-010-831-080		C-CAP,U 0.1-16 Z F
C790	87-012-274-080		C-CAP,U 1000P-50 KB
C791	87-012-274-080		C-CAP,U 1000P-50 KB
C798	87-012-195-080		C-CAP,U 100P-50 J CH
C801	87-010-662-080		C-CAP,E 22-6.3 M MV
C802	87-010-662-080		C-CAP,E 22-6.3 M MV
C803	87-012-337-080		C-CAP,U 56P-50 J CH
C804	87-012-337-080		C-CAP,U 56P-50 J CH
C805	87-012-180-080		C-CAP,U 22P-50 J CH
C806	87-012-180-080		C-CAP,U 22P-50 J CH
C807	87-012-273-080		C-CAP,U 820P-50 K B
C808	87-012-273-080		C-CAP,U 820P-50 K B
C809	87-016-561-080		C-CAP,E 10-6.3 M 85 1 MF
C810	87-016-561-080		C-CAP,E 10-6.3 M 85 1 MF
C811	87-016-561-080		C-CAP,E 10-6.3 M 85 1 MF
C812	87-016-561-080		C-CAP,E 10-6.3 M 85 1 MF
C813	87-012-267-080		C-CAP,U 270P-50 K B GRM
C814	87-012-267-080		C-CAP,U 270P-50 K B GRM
C815	87-012-267-080		C-CAP,U 270P-50 K B GRM
C816	87-012-267-080		C-CAP,U 270P-50 K B GRM
C817	87-010-831-080		C-CAP,U 0.1-16 Z F
C818	87-010-661-080		C-CAP,E 10-16 M MV
C819	87-A10-057-080		C-CAP,TN 100-4 M F95 E
C820	87-010-831-080		C-CAP,U 0.1-16 Z F
C821	87-016-561-080		C-CAP,E 10-6.3 M 85 1 MF
C822	87-010-831-080		C-CAP,U 0.1-16 Z F
C823	87-016-661-080		C-CAP,E 10-16 M 85 1 MF
C824	87-010-831-080		C-CAP,U 0.1-16 Z F
C825	87-010-831-080		C-CAP,U 0.1-16 Z F
C826	87-016-446-080		C-CAP,TN 220-4 M
C827	87-A10-259-080		C-CAP,E 4.7-16 MFA6
C828	87-010-661-080		C-CAP,E 10-16 M MV
C829	87-010-831-080		C-CAP,U 0.1-16 Z F
C830	87-010-661-080		C-CAP,E 10-16 M MV
C831	87-010-831-080		C-CAP,U 0.1-16 Z F
C832	87-010-831-080		C-CAP,U 0.1-16 Z F
C833	87-010-831-080		C-CAP,U 0.1-16 Z F
C834	87-010-657-080		C-CAP,E 1-50
C835	87-010-662-080		C-CAP,E 22-6.3 M MV
C836	87-012-286-080		C-CAP,U 0.01-25 K B
C901	87-A10-019-080		C-CAP,TN 10-6.3 M A SV-M
C910	87-012-280-080		C-CAP,U 3300P-50 K B
D702	87-017-925-070		C-VARI-CAP,KV1460
FC702	86-ZG2-617-010		FF-CABLE, 11P 0.5 100MM MECHA

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
FC705	86-CD0-614-010		FF-CABLE, 8P 1.25 70MM
L701	87-A50-010-080		C-COIL, 22UH LQH3C
L702	87-A50-012-080		C-COIL, 100UH LQH3C
L703	87-A50-117-080		C-COIL,10UHLQH3C
L704	87-A50-117-080		C-COIL,10UHLQH3C
L705	87-A50-010-080		C-COIL, 22UH LQH3C
L706	87-005-777-080		C-COIL, 1UH J NL252018
L707	87-A50-013-080		C-COIL,560UHLQH3C
L708	87-A50-013-080		C-COIL, 560UH LQH3C
L709	87-A50-012-080		C-COIL, 100UH LQH3C
L710	84-HD1-618-080		C-COIL, 33UH M D75C
L711	84-HD1-618-080		C-COIL, 33UH M D75C
L712	87-A50-117-080		C-COIL, 10UH LQH3C
L713	87-A50-108-080		C-COIL, 33UH K NLC25
L715	87-A50-117-080		C-COIL,10UHLQH3C
L720	87-A50-162-080		C-COIL,ZJYS51R5-2PBT
L721	87-A50-163-080		C-COIL,ZBFS5101-PT
L722	87-A50-163-080		C-COIL,ZBFS5101-PT
L801	87-A50-116-080		C-COIL,4.7UHLQH3C
L802	87-A50-116-080		C-COIL,4.7UHLQH3C
L803	87-005-774-080		C-COIL,4BLH
L804	87-005-774-080		C-COIL,4BLH
R749	87-022-239-080		C-RES,U 10K-1/16W F
R753	87-022-239-080		C-RES,U 10K-1/16W F
R757	87-022-239-080		C-RES,U 10K-1/16W F
SW902	87-036-350-080		C-SW,PUSH SPPW9-4.8
SW903	87-036-366-080		C-SW,PUSH SPPW91055A
VR701	87-024-411-080		C-SFR,K 47K H RH03A3A
VR702	87-024-401-080		C-SFR,K 1K H RH03A3A
VR703	87-024-409-080		C-SFR,K 22K H RH03A3A
X701	87-A70-048-010		VIB,45.1584MHZ
X702	87-030-369-080		C-VIB,CER 12.000MHZ PBRC-B

DECK C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SFR1	87-024-581-010		SFR,3.3KH KVSF 637A
SOL2	82-ZM1-618-310		SOL ASSY,27
SW2	87-A90-248-010		SW,MICRO ESE11SH2CXQ
SW3	87-A90-248-010		SW,MICRO ESE11SH2CXQ
SW4	87-A90-248-010		SW,MICRO ESE11SH2CXQ
SW5	87-A90-248-010		SW,MICRO ESE11SH2CXQ
SW6	87-A90-248-010		SW,MICRO ESE11SH2CXQ

RELAY C.B

MOTOR-1 C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SW7	87-036-110-010		SW,MICRO SPPB62
M2	87-A90-346-010		MOT,RF-500TB 12560

CD MOTOR C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
SW1	87-A90-042-010		SW,LEAF MSW 17310

MOTOR-2 C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
M1	87-045-305-010		MOT,RF-500TB
SW1	87-036-110-010		SW,PUSH SPPB 62
SW2	87-036-110-010		SW,PUSH SPPB 62

MOTOR-3 C.B

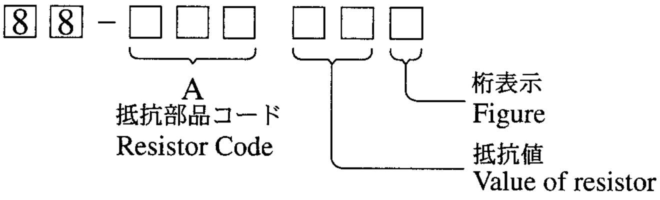
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C1	87-010-263-080		CAP,E 100-10 SME
C3	87-018-209-080		CAP,TC U 0.1-50 Z F UP050
M1	87-045-305-010		MOT,RF-500TB
PH1	87-026-573-010		SNSR,PHOTO GP1S53

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SW C.B			
SW1	87-A90-117-010		SW,PUSH 1-1-1 MPU10371MLB0 MIC
SW2	87-A90-117-010		SW,PUSH 1-1-1 MPU10371MLB0 MIC
DRV C.B			
C902	87-010-787-080		C-CAP,U 0.022-25 K B
C903	87-010-787-080		C-CAP,U 0.022-25 K B
C904	87-010-829-080		C-CAP,U 0.047-16 Z F
C905	87-012-274-080		C-CAP,U 1000P-50 K B
C906	87-012-274-080		C-CAP,U 1000P-50 K B
C907	87-012-274-080		C-CAP,U 1000P-50 K B
C908	87-010-831-080		C-CAP,U 0.1-16 Z F
C909	87-010-831-080		C-CAP,U 0.1-16 Z F
C911	87-016-462-080		C-CAP,S 1-16 Z F
FC900	86-ZG2-618-010		FF-CABLE, 4P 2 20MM

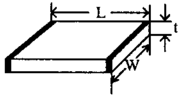
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
L901	87-A50-010-080		C-COIL, 22UH LQH3C
SW901	87-036-269-080		C-SW,PUSH 1-1-1 ESE102MH2
OWH C.B			
CN903	86-CD0-615-010		CONN ASSY,2P OWH
FRONT-CON C.B			

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

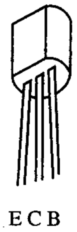
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



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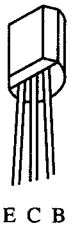
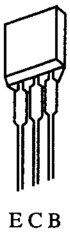
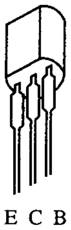
2SC1815
2SC2001
2SD655



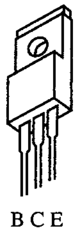
2SC3266
KTA1266



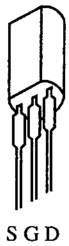
2SA933S
DTA114YS
DTA114ES



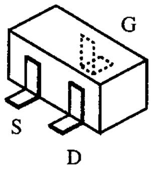
2SA1296
KTC3198



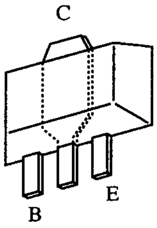
2SB1370



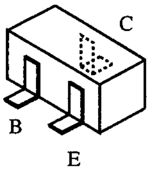
2SK246



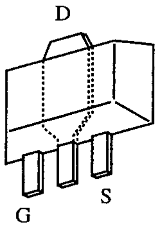
2SK543



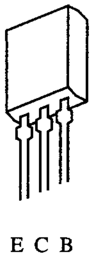
2SA1213



2SA1162
2SA1588
2SC2712
2SC2714
2SC3265
2SC4116
2SD2114
DTA114EK
DTA114TK
DTA124EK
DTA143EK
DTA144EK
DTA144TK
DTC114EK
DTC114TK
DTC114YK
DTC144WK
RN2305

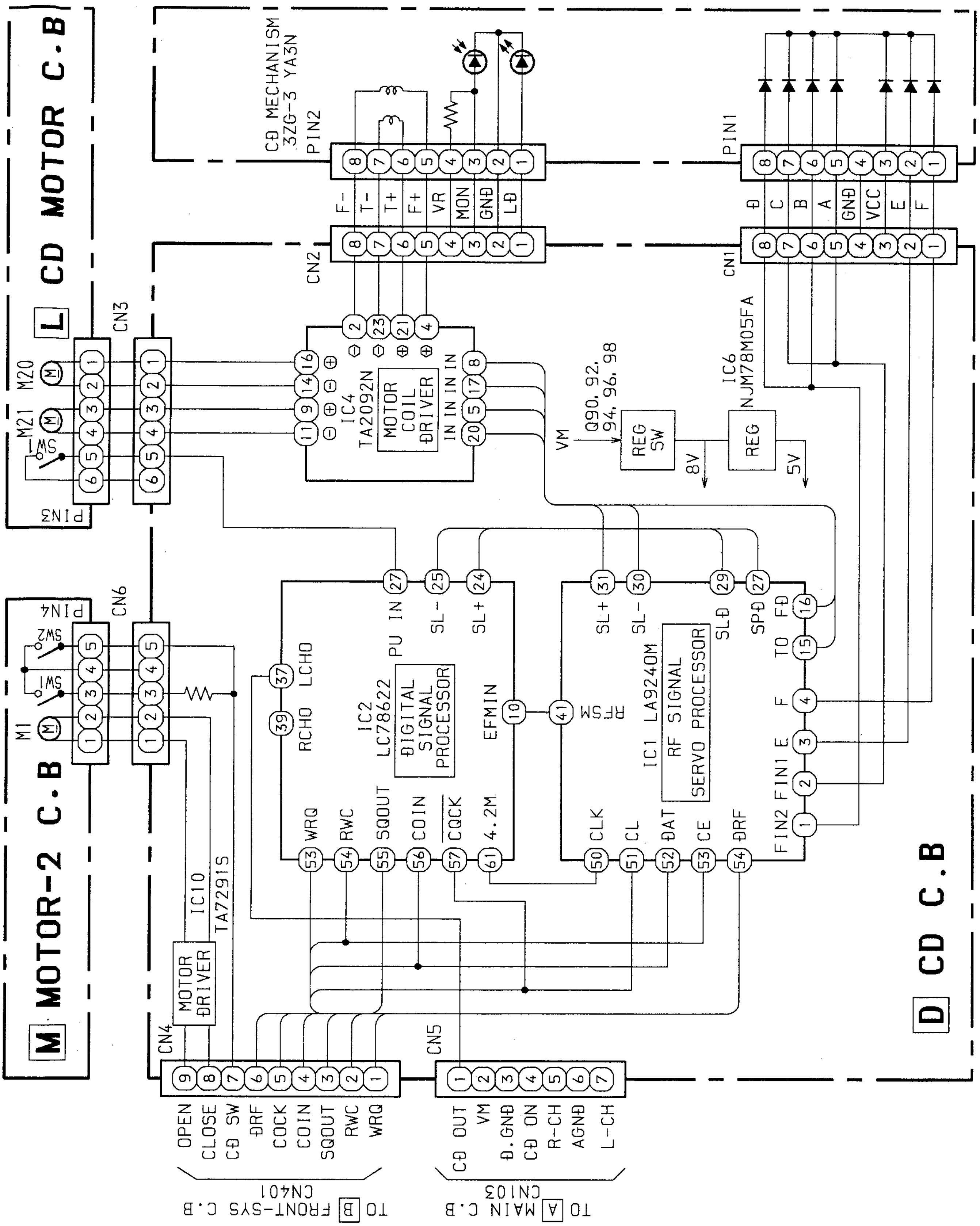


2SJ278
2SK1764
2SK2315

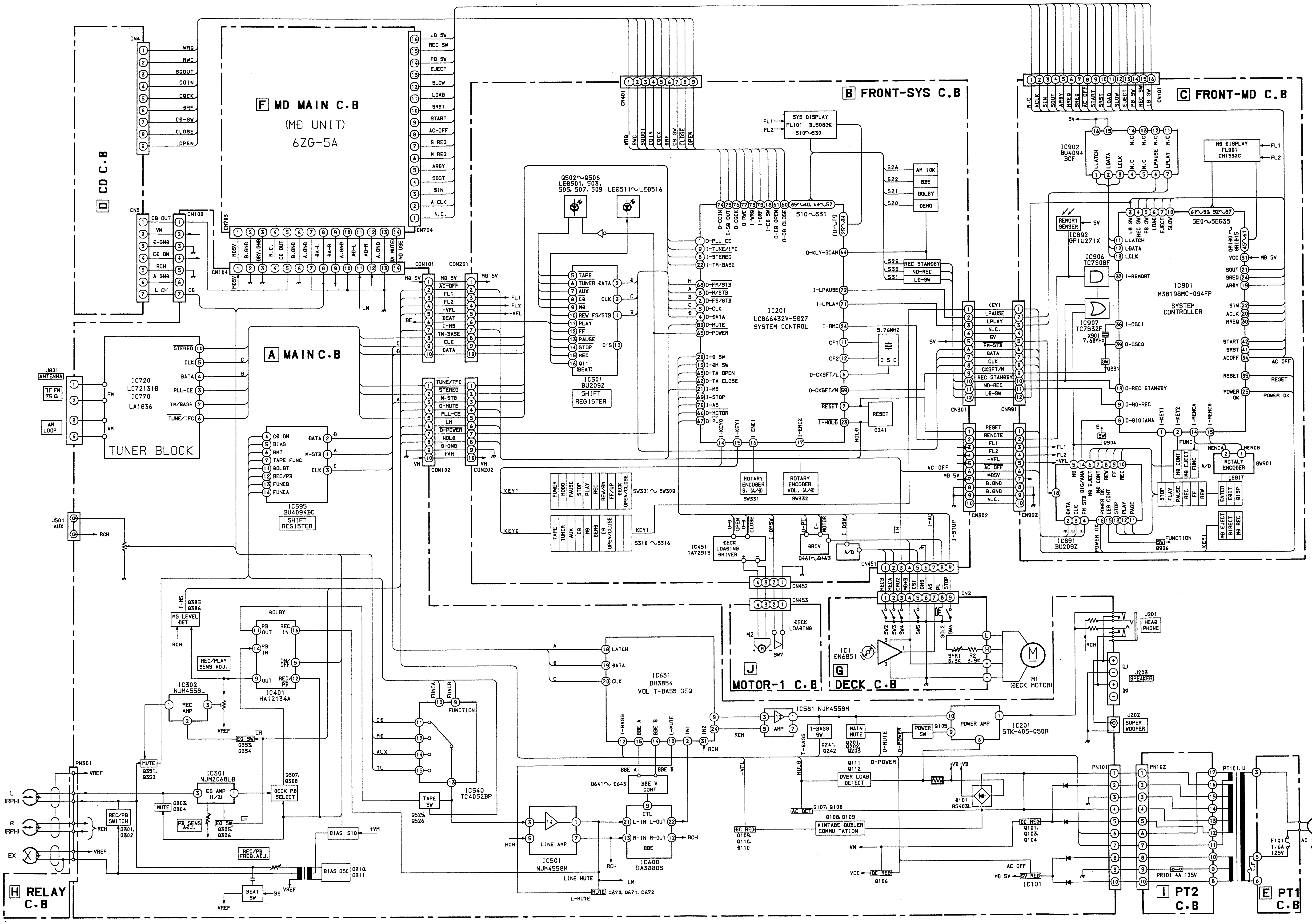


2SD2005

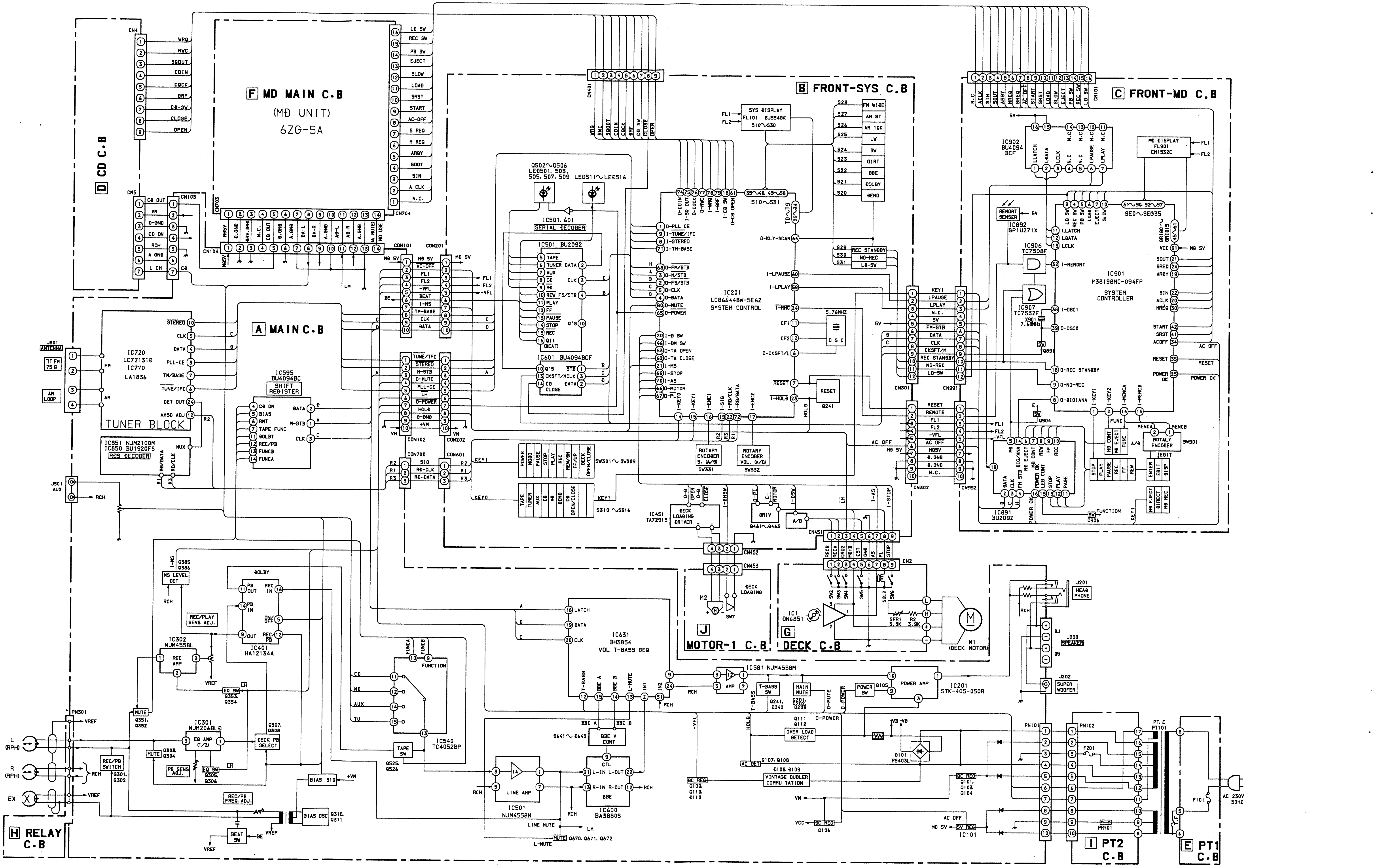
BLOCK DIAGRAM – 1 (CD)


L CD MOTOR C.B
M20
M21
SW1
PIN3
CN3
CD MECHANISM
3ZG-3 YA3N
PIN2
F-
T-
T+
F+
VR
MON
GND
LD
CN2
PIN1
D
C
B
A
GND
VCC
E
F
CN1
IC4
TA2092N
MOTOR COIL DRIVER
IN IN IN IN
IC6
NJM78M05FA
Q90, 92, 94, 96, 98
VM
REG SW
REG
8V
5V
M MOTOR-2 C.B
M1
SW1
SW2
PIN4
CN6
IC10
TA7291S
MOTOR DRIVER
IC2
LC78622
DIGITAL SIGNAL PROCESSOR
PU IN
SL-
SL+
RCHO
LCHO
EFMIN
WRQ
RWC
SQOUT
COIN
CQCK
4.2M
IC1 LA9240M
RF SIGNAL SERVO PROCESSOR
SL+
SL-
SLD
SPD
TO FD
RFSM
F
E
FIN1
FIN2
CLK
CL
DAT
CE
DRF
D CD C.B
CN4
CN5
OPEN
CLOSE
CD SW
DRF
COCK
COIN
SQOUT
RWC
WRQ
CD OUT
VM
D.GND
CD ON
R-CH
AGND
L-CH
TO B FRONT-SYS C.B
CN401
TO A MAIN C.B
CN103

BLOCK DIAGRAM – 2 (MAIN / FRONT : U)

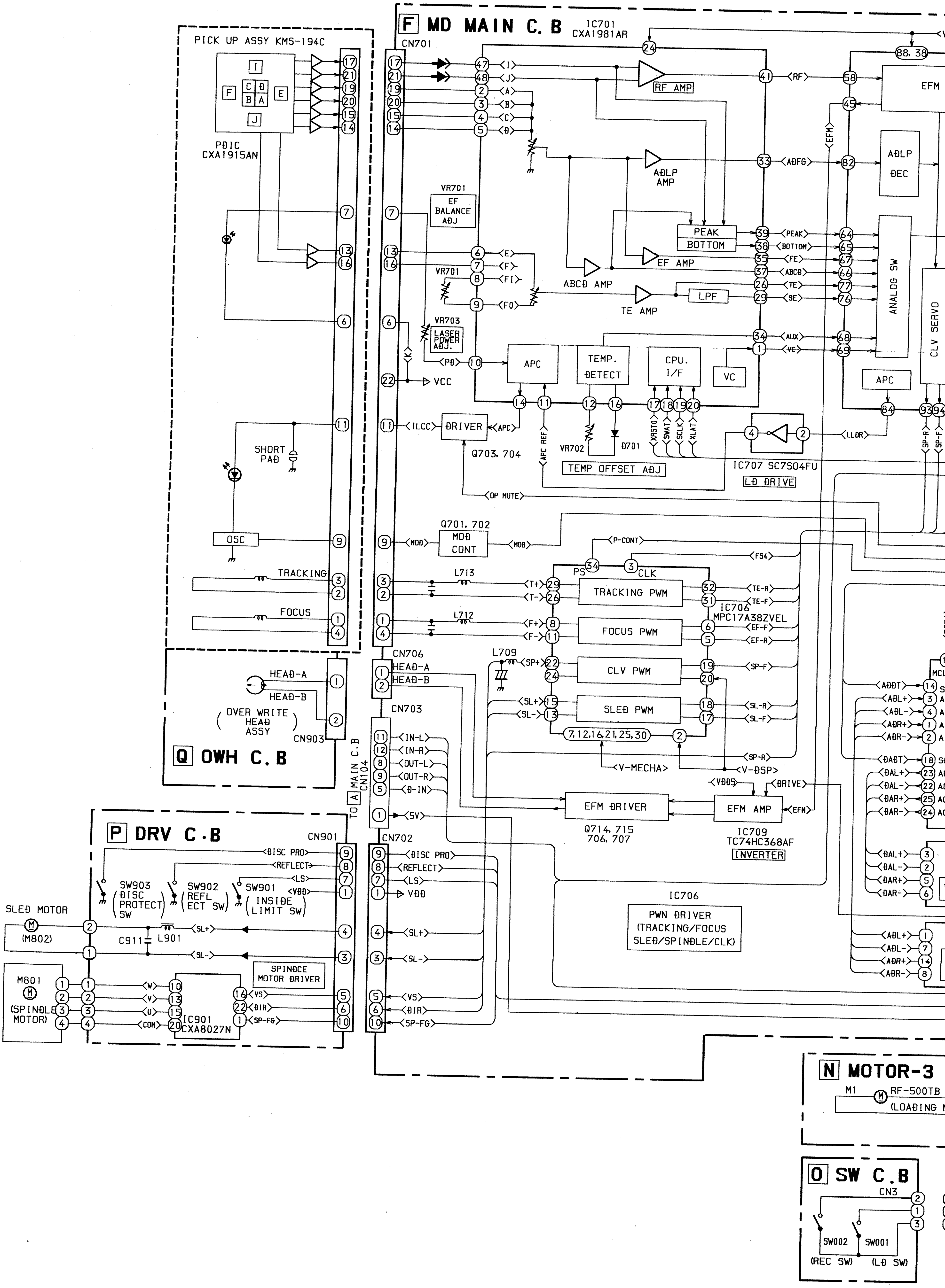

F MD MAIN C.B
(MD UNIT)
6ZG-5A
D CD C.B
B FRONT-SYS C.B
C FRONT-MD C.B
A MAIN C.B
TUNER BLOCK
IC720 LC72131D
IC770 LA1836
J801 ANTENNA
FM 75 Ω
AM LOOP
J501 AUX
IC595 BU4094BC SHIFT REGISTER
IC501 BU2092 SHIFT REGISTER
Q502～Q506 LED501, 503, 505, 507, 509 LED511～LED516
SYS DISPLAY FL101 BJ508DK S10～S30
IC201 LC866432V-5027 SYSTEM CONTROL
5.76MHZ OSC
RESET Q241
ROTARY ENCODER S. (A/D) SW331
ROTARY ENCODER VOL. (A/D) SW332
SW301～SW309
S310～S316
IC902 BU4094 BCF
MD DISPLAY FL901 CM1532C
REMORT SENSER IC892 GP1U271X
IC906 TC7S08F
IC907 TC7S32F
X901 7.68MHz
IC901 M38198MC-094FP SYSTEM CONTROLLER
ROTALY ENCODER SW901
IC891 BU2092
CN301
CN991
CN302
CN992
IC451 TA7291S DECK LOADING DRIVER
Q461～Q463
CN451
CN452
CN453
M2
SW7
DECK LOADING
J MOTOR-1 C.B
G DECK C.B
IC1 DN6851
SFR1 3.3K
R2 3.9K
M1 (DECK MOTOR)
J201 HEAD PHONE
J203 SPEAKER
J202 SUPER WOOFER
MS LEVEL DET Q385 Q386
REC/PLAY SENS ADJ.
IC401 HA12134A DOLBY
IC302 NJM4558L REC AMP
IC301 NJM2068LD EQ AMP (1/2)
DECK PB SELECT Q307, Q308
REC/PB SWITCH Q301, Q302
PB SENS ADJ.
EQ SW Q305, Q306
EQ SW Q353, Q354
MUTE Q351, Q352
MUTE Q303, Q304
BIAS S10
BIAS OSC Q310, Q311
REC/PB FREQ. ADJ.
BEAT SW
H RELAY C.B
PN301
IC540 TC4052BP FUNCTION
TAPE SW Q525, Q526
IC631 BH3854 VOL T-BASS GEQ
IC581 NJM4558M AMP
T-BASS SW Q241, Q242
MAIN MUTE Q201, Q202, Q203
POWER SW Q105
IC201 STK-405-050R POWER AMP
Q111 Q112 OVER LOAD DETECT
Q107, Q108 AC DET
Q108, Q109 VINTAGE DUBLER COMMU TATION
DC REG Q109, Q110, Q110
DC REG Q101, Q103, Q104
DC REG Q106
5V REG IC101
D101 RS403L
BBE V CONT Q641～Q643
IC501 NJM4558M LINE AMP
IC600 BA3880S BBE
LINE MUTE
MUTE Q670, Q671, Q672
PN101
PN102
PT101
PR101 4A 125V
F101 1.6A 125V
AC 120VAC 60Hz
I PT2 C.B
E PT1 C.B

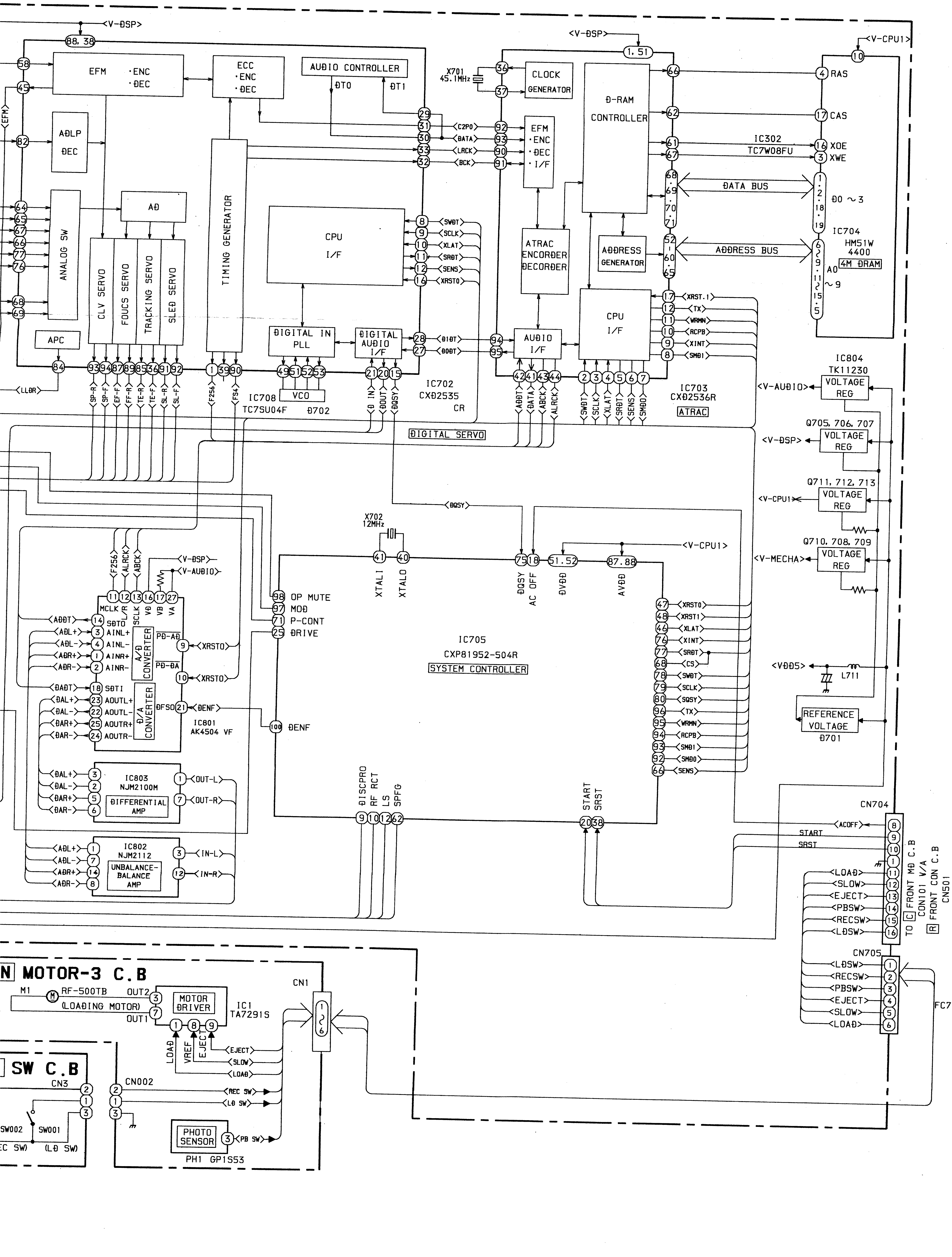
BLOCK DIAGRAM – 3 (MAIN / FRONT : EZ)



F MD MAIN C.B
(MD UNIT)
6ZG-5A
D CD C.B
B FRONT-SYS C.B
C FRONT-MD C.B
A MAIN C.B
J MOTOR-1 C.B
G DECK C.B
H RELAY C.B
I PT2 C.B
E PT1 C.B
CN4
CN5
CN103
CN104
CN703
CN704
CN101
CN201
CN102
CN202
CN700
CN601
CN401
CN301
CN991
CN302
CN992
CN451
CN452
CN453
CN2
SYS DISPLAY
FL101 BJ554GK
S10~S30
IC201
LC866448W-5E62
SYSTEM CONTROL
5.76MHZ
RESET
Q241
ROTARY ENCODER S. (A/B)
SW331
ROTARY ENCODER VOL. (A/B)
SW332
Q502~Q506
LED501, 503, 505, 507, 509
LED511~LED516
IC501, 601
SERIAL DECODER
IC501 BU2092
IC601 BU4094BCF
SW301~SW309
S310~S316
IC720 LC72131D
IC770 LA1836
TUNER BLOCK
J801 ANTENNA
FM 75 Ω
AM LOOP
IC851 NJM2100M
IC850 BU1920FS
RDS DECODER
IC595 BU4094BC
SHIFT REGISTER
J501 AUX
IC902 BU4094 BCF
MD DISPLAY
FL901 CM1532C
REMORT SENSER
IC892 GP1U271X
IC906 TC7S08F
IC907 TC7S32F
X901 7.68MHz
IC901 M38198MC-094FP
SYSTEM CONTROLLER
SE0~SE035
ROTARY ENCODER
SW901
IC891 BU2092
Q904
Q906
IC451 TA7291S
DECK LOADING DRIVER
DRIV
Q461~Q463
A/D
M2
SW7
DECK LOADING
IC1 DN6851
SFR1 3.3K
R2 3.9K
M1 (DECK MOTOR)
J201 HEAD PHONE
J203 SPEAKER
J202 SUPER WOOFER
Q385 Q386
MS LEVEL DET
REC/PLAY SENS ADJ.
DOLBY
IC401 HA12134A
IC302 NJM4558L
REC AMP
EQ SW
Q353, Q354
MUTE
Q351, Q352
IC301 NJM2068LD
EQ AMP (1/2)
DECK PB SELECT
Q307, Q308
MUTE Q303, Q304
PB SENS ADJ.
EQ SW Q305, Q306
REC/PB SWITCH Q301, Q302
BIAS SIO
REC/PB FREQ. ADJ.
BIAS OSC Q310, Q311
BEAT SW
PN301
L (RPH)
R (RPH)
EX
IC631 BH3854
VOL T-BASS GEQ
FUNCTION
IC540 TC4052BP
TAPE SW
Q525, Q526
IC501 NJM4558M
LINE AMP
LINE MUTE
MUTE Q670, Q671, Q672
L-MUTE
BBE V CONT
D641~D643
IC600 BA3880S
BBE
IC581 NJM4558M
AMP
T-BASS SW
Q241, Q242
MAIN MUTE
Q201, Q202, Q203
POWER SW
Q105
POWER AMP
IC201 STK-405-050R
Q111 Q112
OVER LOAD DETECT
AC DET Q107, Q108
Q108, Q109
VINTAGE DUBLER COMMU TATION
DC REG Q109, Q110
DC REG Q101, Q103, Q104
D101 RS403L
DC REG Q106
5V REG IC101
PN101
PN102
F201
PR101
PT, E PT101
F101
AC 230V 50HZ

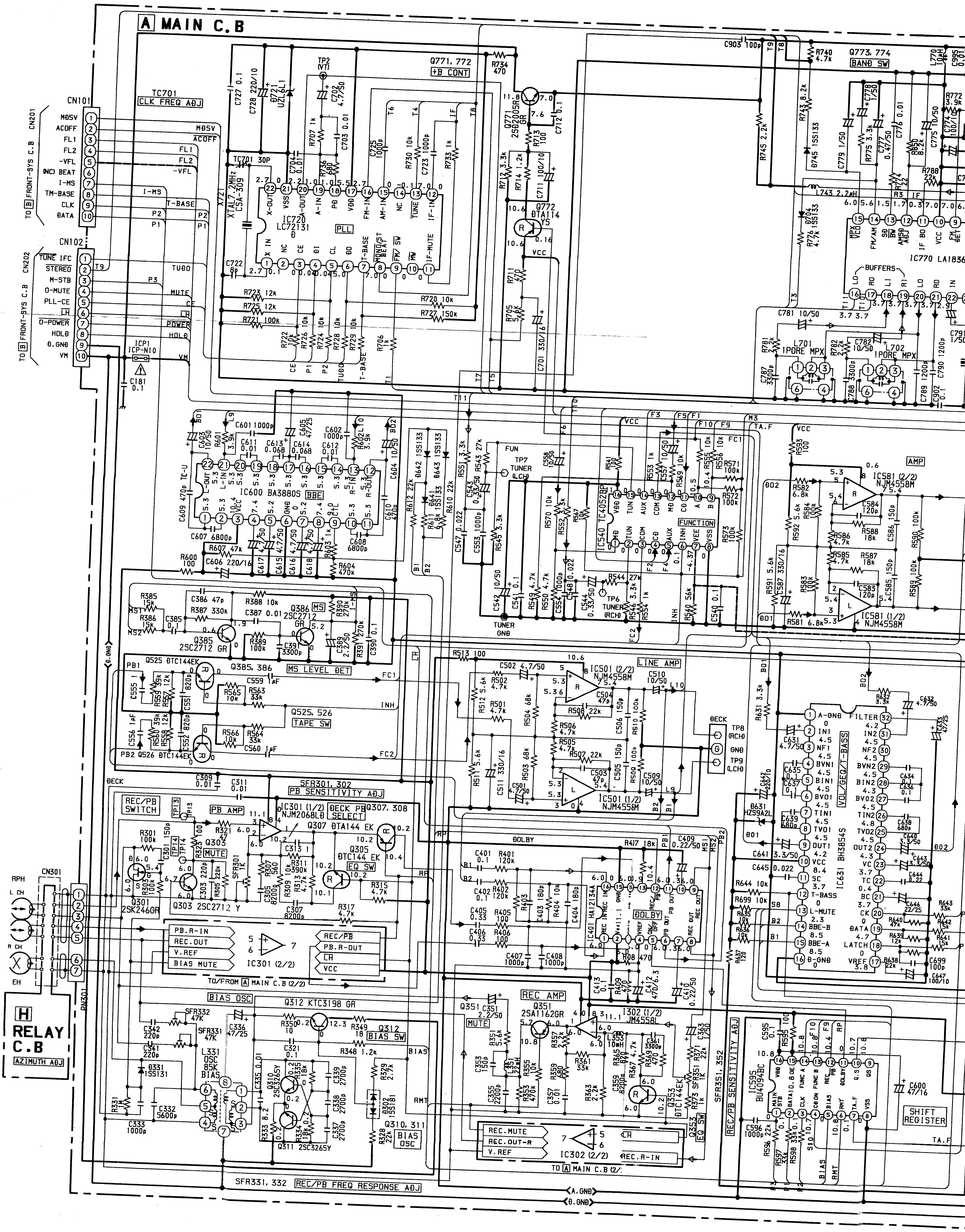
BLOCK DIAGRAM – 4 (MD)


F MD MAIN C. B
IC701
CXA1981AR
CN701
PICK UP ASSY KMS-194C
PDIC
CXA1915AN
RF AMP
RF
EFM
ADLP AMP
ADFG
ADLP DEC
PEAK
BOTTOM
EF AMP
FE
ABCD AMP
ABCD
TE AMP
TE
LPF
SE
ANALOG SW
CLV SERVO
AUX
VC
APC
TEMP. DETECT
CPU. I/F
VC
VR701
EF BALANCE ADJ
VR703
LASER POWER ADJ.
VCC
DRIVER
Q703, 704
APC REF
VR702
D701
TEMP OFFSET ADJ
XRSTO
SWAT
SCLK
XLAT
IC707 SC7S04FU
LD DRIVE
LLDR
SP-R
SP-F
OP MUTE
SHORT PAD
OSC
TRACKING
FOCUS
Q701, 702
MOD CONT
MOD
P-CONT
FS4
L713
L712
PS
CLK
TRACKING PWM
FOCUS PWM
CLV PWM
SLED PWM
IC706
MPC17A38ZVEL
TE-R
TE-F
EF-F
EF-R
SP-F
SL-R
SL-F
L709
SP+
SL+
SL-
7,12,16,21,25,30
V-MECHA
V-DSP
VDD5
DRIVE
EFM DRIVER
Q714, 715
706, 707
EFM AMP
IC709
TC74HC368AF
INVERTER
IC706
PWN DRIVER
(TRACKING/FOCUS
SLED/SPINDLE/CLK)
CN706
HEAD-A
HEAD-B
CN703
IN-L
IN-R
OUT-L
OUT-R
D-IN
5V
TO A MAIN C.B CN104
CN702
DISC PRO
REFLECT
LS
VDD
SL+
SL-
VS
BIR
SP-FG
OVER WRITE HEAD ASSY
CN903
Q OWH C. B
P DRV C·B
CN901
SW903 DISC PROTECT SW
SW902 REFLECT SW
SW901 INSIDE LIMIT SW
SLED MOTOR
(M802)
C911
L901
M801
(SPINDLE MOTOR)
SPINDLE MOTOR DRIVER
IC901
CXA8027N
W
V
U
COM
ADDT
ADL+
ADL-
ADR+
ADR-
DADT
DAL+
DAL-
DAR+
DAR-
MCL
N MOTOR-3
M1
RF-500TB
(LOADING
O SW C.B
CN3
SW002
SW001
(REC SW)
(LD SW)

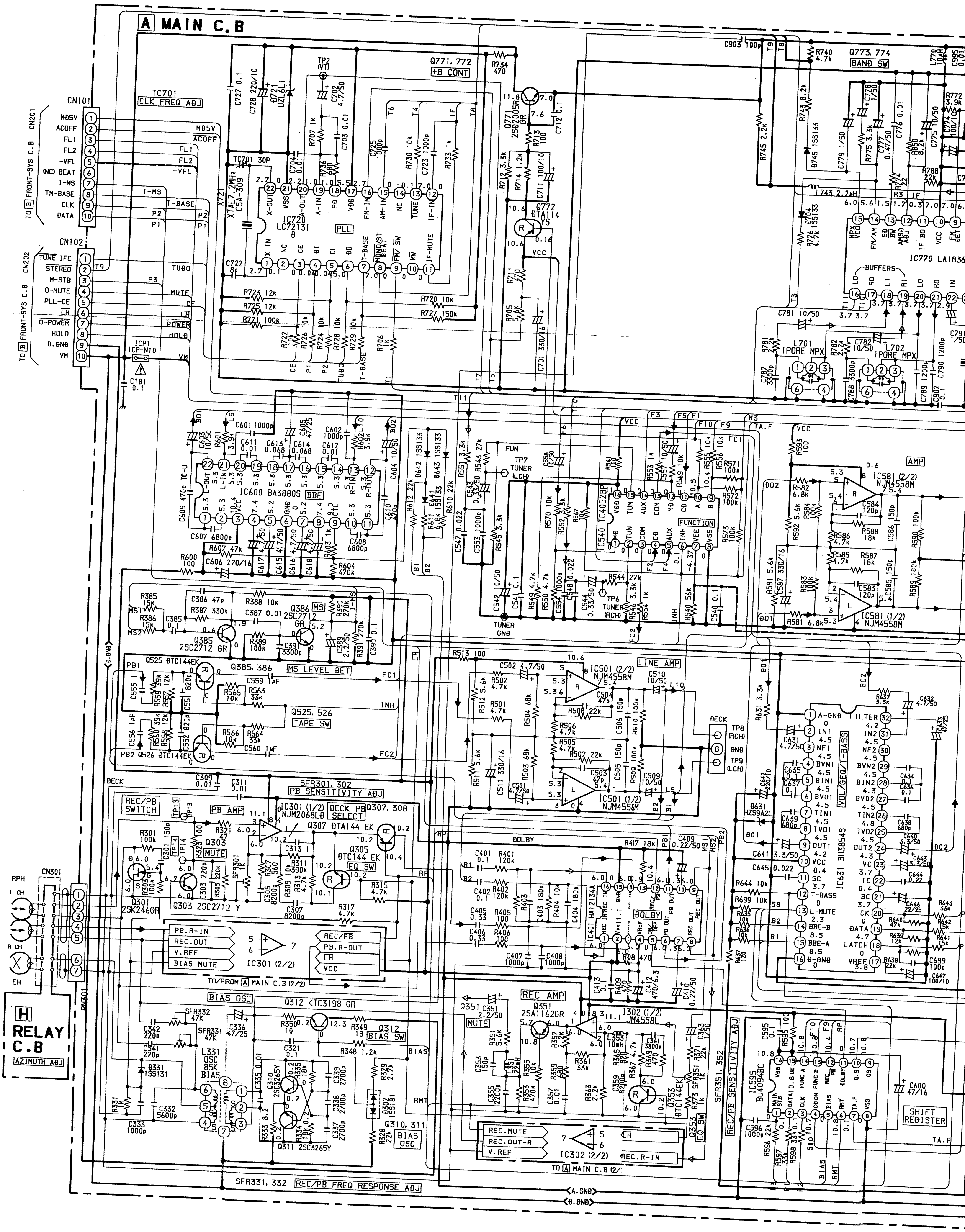


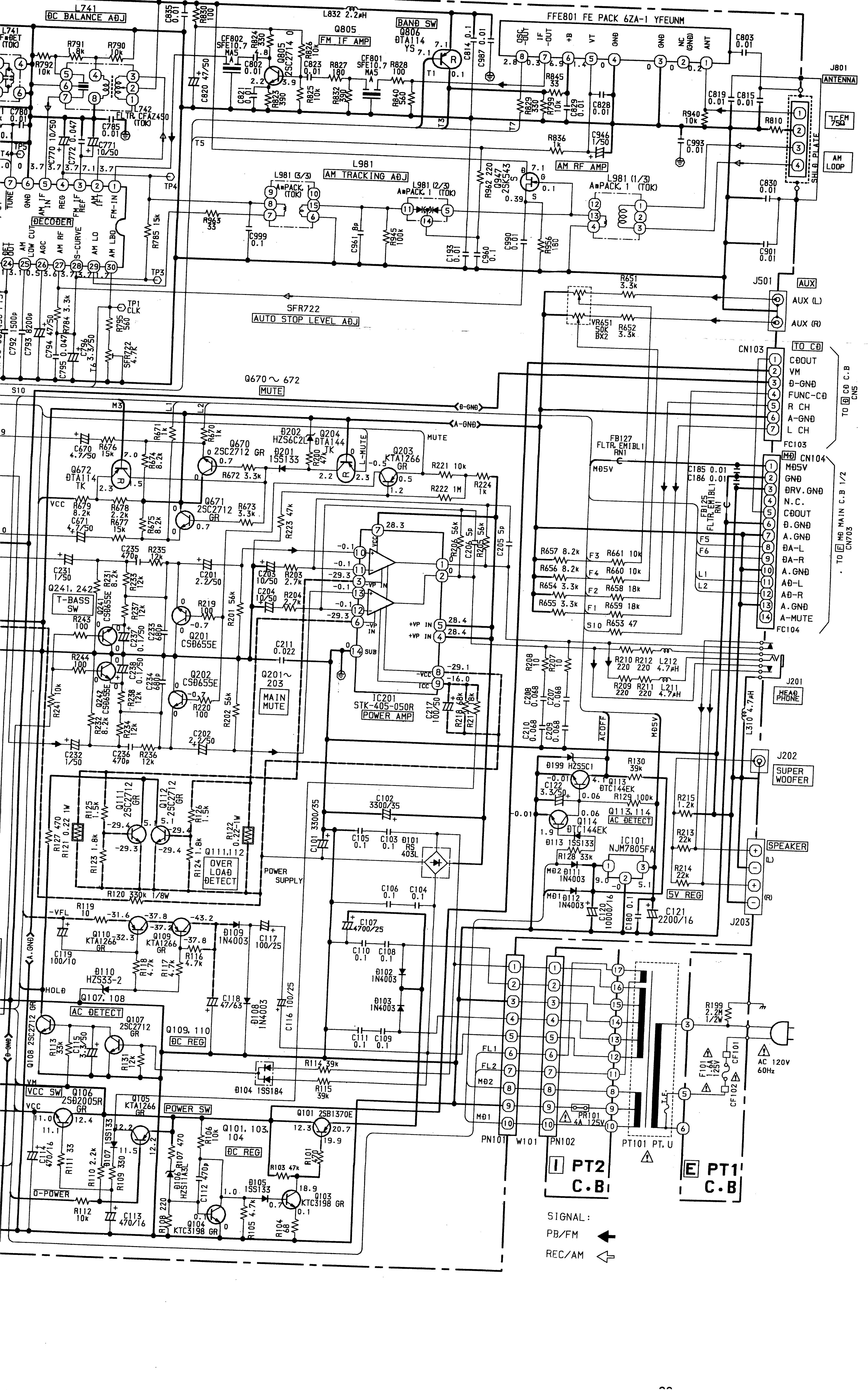
<V-DSP>
88, 38
EFM ·ENC ·DEC
ECC ·ENC ·DEC
AUDIO CONTROLLER
DTO
DT1
ADLP DEC
AD
ANALOG SW
CLV SERVO
FOUCS SERVO
TRACKING SERVO
SLED SERVO
TIMING GENERATOR
APC
<LLDR>
SP-R SP-F EF-F FF-R TE-R TE-F SL-R SL-F
F256 FS4
CPU I/F
DIGITAL IN PLL
DIGITAL AUDIO I/F
VCO
IC708 TC7SU04F
D702
D IN DOUT DQSY
IC702 CXD2535 CR
DIGITAL SERVO
<SWDT> <SCLK> <XLAT> <SRDT> <SENS> <XRST0>
<C2PO> <DATA> <LRCK> <BCK>
<DIDT> <DODT>
X701 45.1MHz
CLOCK GENERATOR
EFM ·ENC ·DEC ·I/F
D-RAM CONTROLLER
ATRAC ENCORDER DECORDER
ADDRESS GENERATOR
AUDIO I/F
CPU I/F
ADDT DATA ABCK ALRCK
SWDT SCLK XLAT SRDT SENS SMD0
<XRST.1> <TX> <WRMN> <RCPB> <XINT> <SMD1>
IC703 CXD2536R
ATRAC
<V-CPU1>
RAS CAS XOE XWE
IC302 TC7W08FU
DATA BUS
ADDRESS BUS
D0 ~3
A0 ~9
IC704 HM51W 4400
4M DRAM
IC804 TK11230
VOLTAGE REG
<V-AUDIO>
Q705, 706, 707
<V-DSP>
Q711, 712, 713
<V-CPU1>
Q710, 708, 709
<V-MECHA>
<VDD5>
L711
REFERENCE VOLTAGE
D701
X702 12MHz
XTALI XTALO
DQSY AC OFF DVDD AVDD
<V-CPU1>
<DQSY>
OP MUTE
MOD
P-CONT
DRIVE
DENF
IC705
CXP81952-504R
SYSTEM CONTROLLER
<XRST0> <XRST1> <XLAT> <XINT> <SRDT> <CS> <SWDT> <SCLK> <SQSY> <TX> <WRMN> <RCPB> <SMD1> <SMD0> <SENS>
DISCPRO RF RCT LS SPFG
START SRST
F256 ALRCK ABCK
<V-DSP>
<V-AUDIO>
MCLK L/R SCLK VD VB VA
<ADDT> SDTO
<ADL+> AINL+
<ADL-> AINL-
<ADR+> AINR+
<ADR-> AINR-
A/D CONVERTER
PD-AD
PD-DA
<XRSTO>
<DADT> SDTI
<DAL+> AOUTL+
<DAL-> AOUTL-
<DAR+> AOUTR+
<DAR-> AOUTR-
D/A CONVERTER
DFSO
<DENF>
IC801 AK4504 VF
IC803 NJM2100M DIFFERENTIAL AMP
<OUT-L> <OUT-R>
IC802 NJM2112 UNBALANCE-BALANCE AMP
<IN-L> <IN-R>
CN704
<ACOFF>
START
SRST
<LOAD> <SLOW> <EJECT> <PBSW> <RECSW> <LDSW>
TO C FRONT MD C.B CON101 V/A
R FRONT CON C.B CN501
CN705
<LDSW> <RECSW> <PBSW> <EJECT> <SLOW> <LOAD>
FC705
MOTOR-3 C.B
M1 RF-500TB
(LOADING MOTOR)
OUT2 OUT1
MOTOR DRIVER
IC1 TA7291S
LOAD VREF EJECT
<EJECT> <SLOW> <LOAD>
CN1
SW C.B
CN3
CN002
<REC SW> <LD SW>
SW002 SW001
(REC SW) (LD SW)
PHOTO SENSOR
<PB SW>
PH1 GP1S53

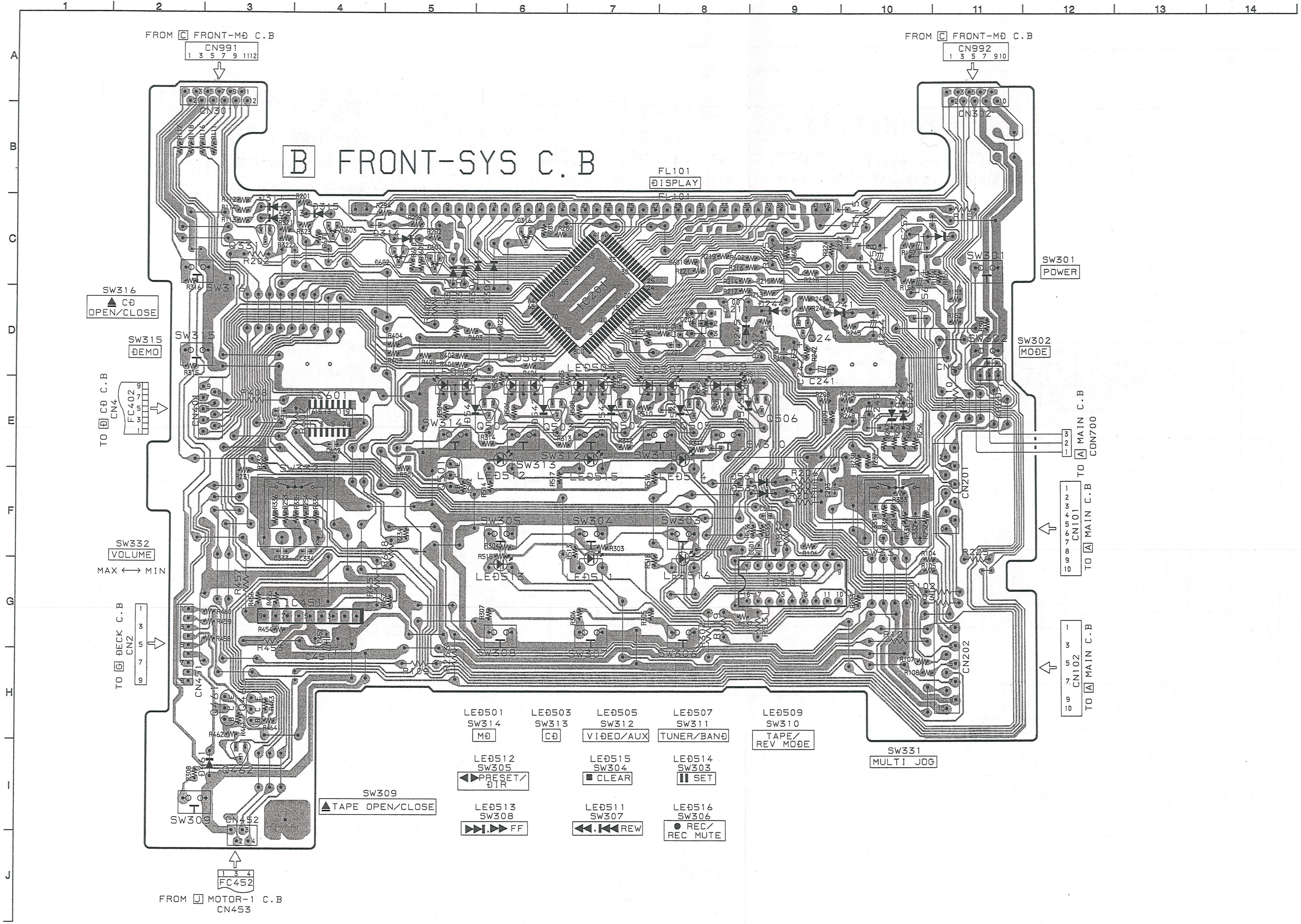
SCHEMATIC DIAGRAM – 1 (MAIN : U)


A MAIN C.B
CN101
TO B FRONT-SYS C.B CN201
M8SV
ACOFF
FL1
FL2
-VFL
(NC) BEAT
I-MS
TM-BASE
CLK
DATA
CN102
TO B FRONT-SYS C.B CN202
TUNE IFC
STEREO
M-STB
O-MUTE
PLL-CE
LH
O-POWER
HOLD
D.GND
VM
ICP1 ICP-N10
C181 0.1
TC701 CLK FREQ ADJ
X721 XTAL7.2MHz CSA-309
IC720 LC72131 PLL
Q771, 772 +B CONT
Q771 2SD2005R GR
Q772 DTA114 YS
C903 100p
R740 4.7k
Q773, 774 BAND SW
IC770 LA1836
BUFFERS
L701 1PORE MPX
L702 1PORE MPX
IC600 BA3880S BBE
TP7 TUNER (LCH)
TP6 TUNER (RCH)
TUNER GND
IC540 TC4052BP
FUNCTION
AMP
IC581 (2/2) NJM4558M
IC581 (1/2) NJM4558M
Q385, 386 MS LEVEL DET
Q385 2SC2712 GR
Q386 2SC2712
Q525 DTC144EK
Q526 DTC144EK
Q525, 526 TAPE SW
IC501 (2/2) NJM4558M LINE AMP
IC501 (1/2) NJM4558M
DECK
TP8 (RCH)
GND
TP9 (LCH)
IC631 BH3854S VOL/GEQ/T-BASS
SFR301, 302 PB SENSITIVITY ADJ
REC/PB SWITCH
PB AMP
IC301 (1/2) NJM2068LD
DECK PB SELECT
Q307, 308
Q307 DTA144 EK
Q305 DTC144 EK EQ SW
MUTE
Q301 2SK246GR
Q303 2SC2712 Y
CN301
RPH
L CH
R CH
EH
PN301
H RELAY C.B
AZIMUTH ADJ
PB.R-IN
REC.OUT
V.REF
BIAS MUTE
IC301 (2/2)
REC/PB
PB.R-OUT
CH
VCC
TO/FROM A MAIN C.B (2/2)
DOLBY
IC401 HA12134A
BIAS OSC
Q312 KTC3198 GR
Q312 BIAS SW
L331 OSC 85K BIAS
Q310 2SC3265Y
Q311 2SC3265Y
Q310, 311 BIAS OSC
D331 1SS131
D302 1SS181
REC AMP
Q351 2SA1162GR
Q351 MUTE
IC302 (1/2) JM4558L
Q353 DTC144EK EQ SW
SFR351, 352 REC/PB SENSITIVITY ADJ
IC595 BU4094BC
SHIFT REGISTER
C600 47/16
REC.MUTE
REC.OUT-R
V.REF
IC302 (2/2)
REC.R-IN
TO A MAIN C.B (2/
SFR331, 332 REC/PB FREQ RESPONSE ADJ
A.GND
D.GND
TA.F

SCHEMATIC DIAGRAM – 1 (MAIN : U)


A MAIN C.B
CN101
CN102
TO B FRONT-SYS C.B CN201
TO B FRONT-SYS C.B CN202
M05V
ACOFF
FL1
FL2
-VFL
(NC) BEAT
I-MS
TM-BASE
CLK
DATA
TUNE IFC
STEREO
M-STB
O-MUTE
PLL-CE
LH
O-POWER
HOLD
D.GND
VM
ICP1 ICP-N10
TC701 CLK FREQ ADJ
X721 XTAL7.2MHz CSA-309
IC720 LC72131 PLL
Q771, 772 +B CONT
Q771 2SD2205R GR
Q772 DTA114 YS
Q773, 774 BAND SW
IC770 LA1836
BUFFERS
L701 1PORE MPX
L702 1PORE MPX
IC600 BA3880S BBE
IC540 TC4052BP FUNCTION
TP7 TUNER (LCH)
TP6 TUNER (RCH)
TUNER GND
AMP
IC581 (2/2) NJM4558M
IC581 (1/2) NJM4558M
Q385, 386 MS LEVEL DET
Q385 2SC2712 GR
Q386 2SC2712 GR
Q525 DTC144EK
Q526 DTC144EK
Q525, 526 TAPE SW
LINE AMP
IC501 (2/2) NJM4558M
IC501 (1/2) NJM4558M
DECK
TP8 (RCH)
GND
TP9 (LCH)
SFR301, 302 PB SENSITIVITY ADJ
REC/PB SWITCH
PB AMP
IC301 (1/2) NJM2068LD
DECK PB SELECT
Q307, 308
Q307 DTA144 EK
Q305 DTC144 EK
EQ SW
MUTE
Q301 2SK246GR
Q303 2SC2712 Y
PB.R-IN
REC.OUT
V.REF
BIAS MUTE
REC/PB
PB.R-OUT
CH
VCC
IC301 (2/2)
TO/FROM A MAIN C.B (2/2)
DOLBY
IC401 HA12134A
REC AMP
Q351 2SA1162GR
I302 (1/2) JM4558I
Q351 MUTE
Q353 DTC144EK
REC.MUTE
REC.OUT-R
V.REF
IC302 (2/2)
REC.R-IN
TO A MAIN C.B (2/
BIAS OSC
Q312 KTC3198 GR
Q312 BIAS SW
Q310 2SC3265Y
Q311 2SC3265Y
Q310, 311 BIAS OSC
L331 OSC 85K BIAS
D331 1SS131
SFR331 47K
SFR332 47K
SFR351, 352 REC/PB SENSITIVITY ADJ
SFR331, 332 REC/PB FREQ RESPONSE ADJ
IC631 BH3854S VOL/GEQ/T-BASS
FILTER
IC595 BU4094BC
SHIFT REGISTER
A.GND
D.GND
CN301
RPH
L CH
R CH
EH
PN301
H RELAY C.B
AZIMUTH ADJ


L741
ƉC BALANCE AƉJ
FFE801 FE PACK 6ZA-1 YFEUNM
L832 2.2μH
Q805
FM IF AMP
BAND SW
Q806 ƉTA114 YS
CF802 SFE10.7 MA5
CF801 SFE10.7 MA5
J801
ANTENNA
FM 75Ω
AM LOOP
SHLD PLATE
L742 FLTR CFAZ450 (TOK)
ƉECOƉER
L981
AM TRACKING AƉJ
L981 (3/3) AMPACK (TOK)
L981 (2/3) AMPACK 1 (TOK)
L981 (1/3) AMPACK 1 (TOK)
Q947 2SK543
AM RF AMP
SFR722
AUTO STOP LEVEL AƉJ
J501
AUX
AUX (L)
AUX (R)
VR651 50K BX2
CN103
TO CƉ
CƉOUT
VM
Ɖ-GNƉ
FUNC-CƉ
R CH
A-GNƉ
L CH
TO Ɖ CƉ C.B CN5
FC103
MƉ CN104
MƉ5V
GNƉ
ƉRV.GNƉ
N.C.
CƉOUT
Ɖ.GNƉ
A.GNƉ
ƉA-L
ƉA-R
A.GNƉ
AƉ-L
AƉ-R
A.GNƉ
A-MUTE
FC104
TO E MƉ MAIN C.B 1/2 CN703
Q670 ~ 672
MUTE
Q670 2SC2712 GR
Q671 2SC2712 GR
Q672 ƉTA114 TK
Ɖ202 HZS6C2L
Q204 ƉTA144 TK
Ɖ201 1SS133
Q203 KTA1266 GR
L-MUTE
FB127 FLTR EMIBL1 RN1
FB125 FLTR EMIBL1 RN1
Q241, 242
T-BASS SW
Q201 CSƉ655E
Q202 CSƉ655E
Q201~203
MAIN MUTE
IC201 STK-405-050R
POWER AMP
J201
HEAƉ PHONE
J202
SUPER WOOFER
Q111 2SC2712 GR
Q112 2SC2712 GR
Q111,112
OVER LOAƉ ƉETECT
POWER SUPPLY
C102 3300/35
C101 3300/35
Ɖ101 RS 403L
Ɖ199 HZS5C1
Q113 ƉTC144EK
Q114 ƉTC144EK
Q113, 114
AC ƉETECT
Ɖ113 1SS133
IC101 NJM7805FA
5V REG
SPEAKER
J203
Q110 KTA1266 GR
Q109 KTA1266 GR
Ɖ109 1N4003
Ɖ110 HZS33-2
Q107, 108
AC ƉETECT
Q107 2SC2712 GR
Q108 2SC2712 GR
Q109, 110
ƉC REG
Ɖ104 1SS184
VCC SW
Q106 2SƉ2005R GR
Q105 KTA1266 GR
POWER SW
Q101 2SB1370E
Q101, 103, 104
ƉC REG
Q103 KTC3198 GR
Q104 KTC3198 GR
Ɖ105 1SS133
Ɖ106 HZ5IIA3L
Ɖ-POWER
PN101
W101
PN102
PR101 4A 125V
PT101 PT,U
I PT2 C.B
E PT1 C.B
R199 2.2M 1/2W
F101 1.6A 125V
CF101
CF102
AC 120V 60Hz
SIGNAL:
PB/FM
REC/AM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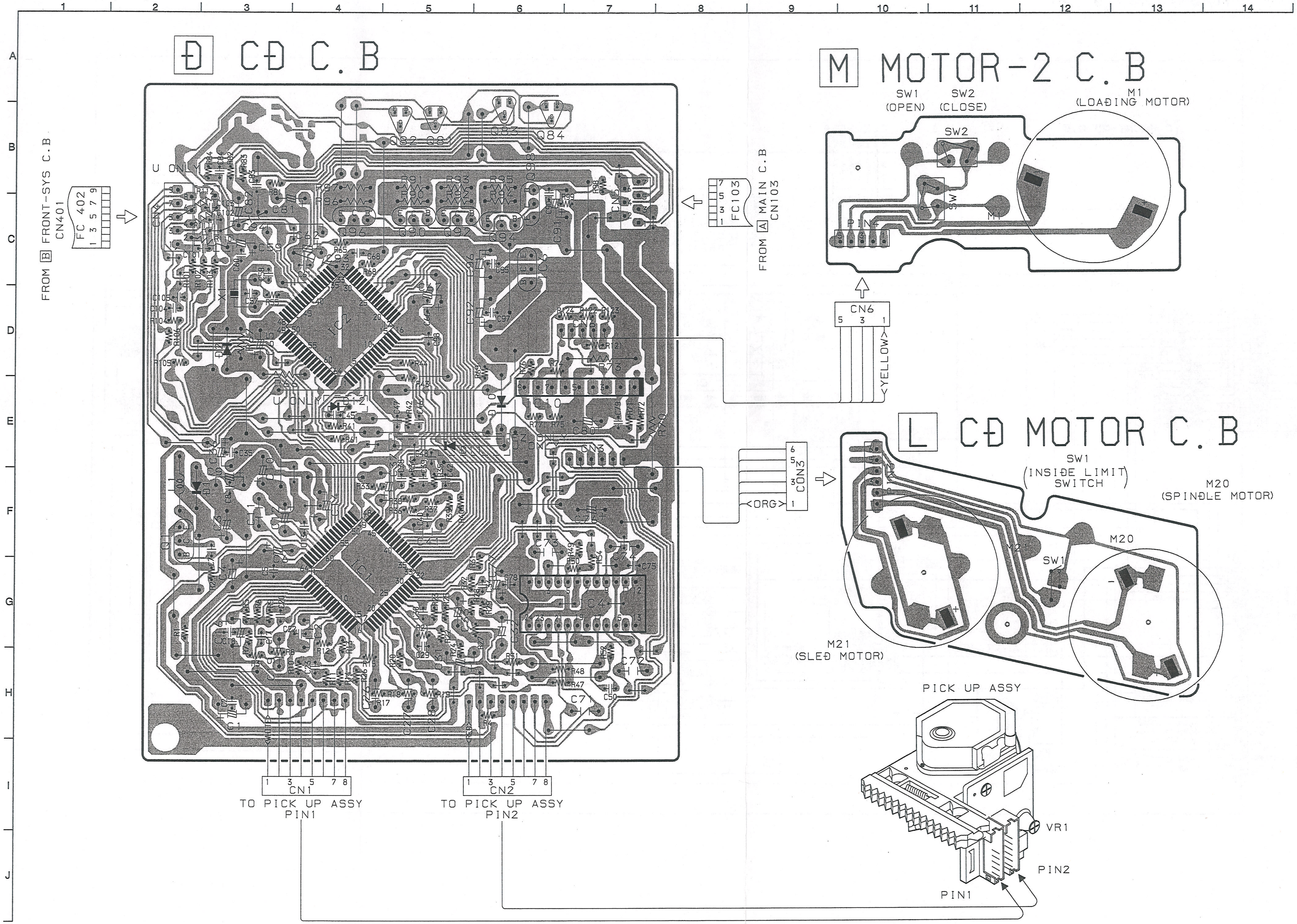
I
J
FROM C FRONT-MD C.B
CN991
CN301
FROM C FRONT-MD C.B
CN992
CN302
B FRONT-SYS C.B
FL101
DISPLAY
IC201
IC601
IC451
IC501
SW301
POWER
SW302
MODE
SW316
▲ CD OPEN/CLOSE
SW315
DEMO
TO D CD C.B CN4
FC402
CN401
TO A MAIN C.B CN700
TO A MAIN C.B CN101
CN201
TO A MAIN C.B CN102
CN202
SW332
VOLUME
MAX ⟷ MIN
TO G DECK C.B CN2
CN451
SW309
▲TAPE OPEN/CLOSE
CN452
FC452
FROM J MOTOR-1 C.B CN453
LED501 SW314 MD
LED503 SW313 CD
LED505 SW312 VIDEO/AUX
LED507 SW311 TUNER/BAND
LED509 SW310 TAPE/REV MODE
SW331 MULTI JOG
LED512 SW305 ◀▶PRESET/DIR
LED515 SW304 ■ CLEAR
LED514 SW303 ❚❚ SET
LED513 SW308 ▶▶❙.▶▶ FF
LED511 SW307 ◀◀.❙◀◀ REW
LED516 SW306 ● REC/REC MUTE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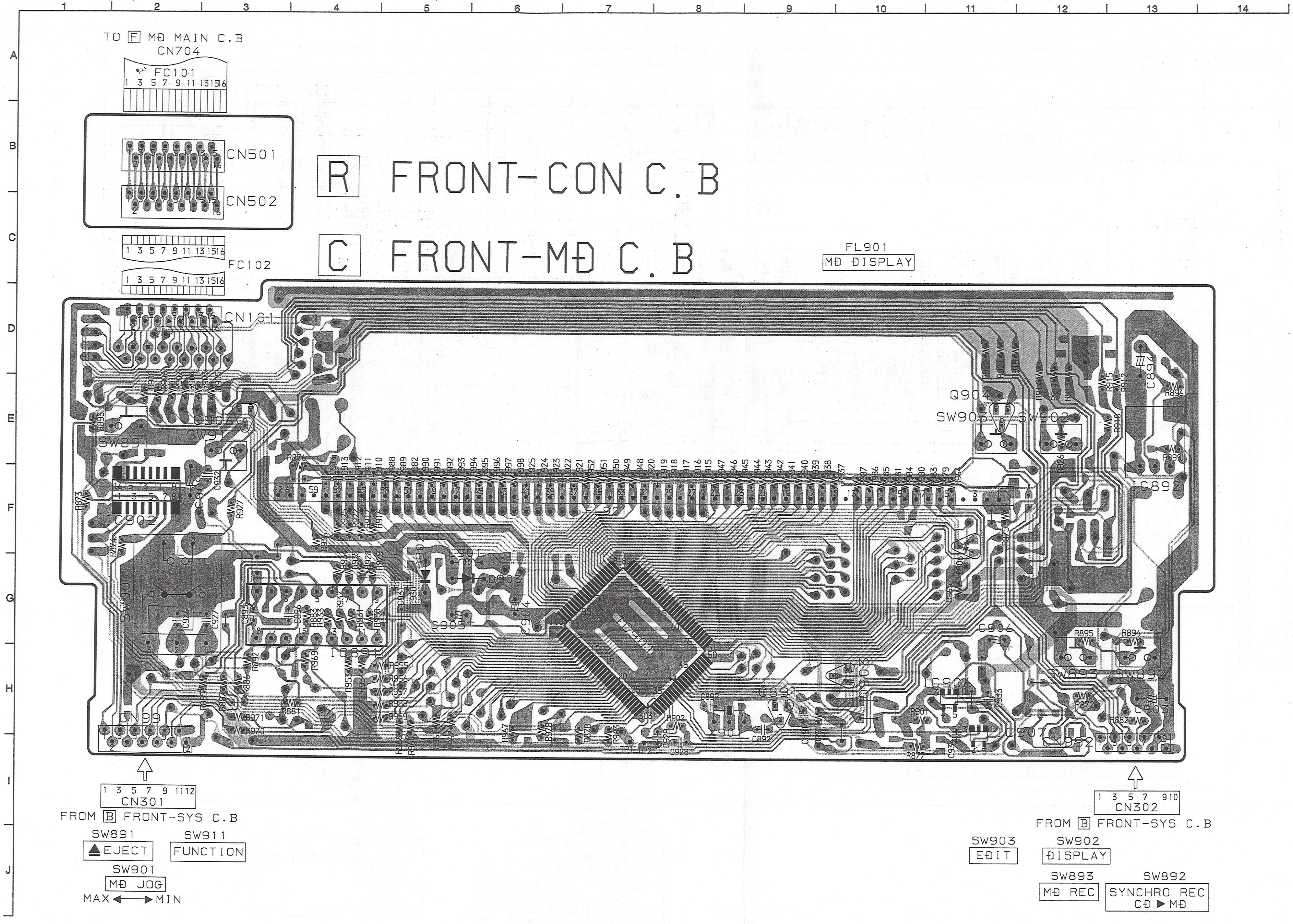
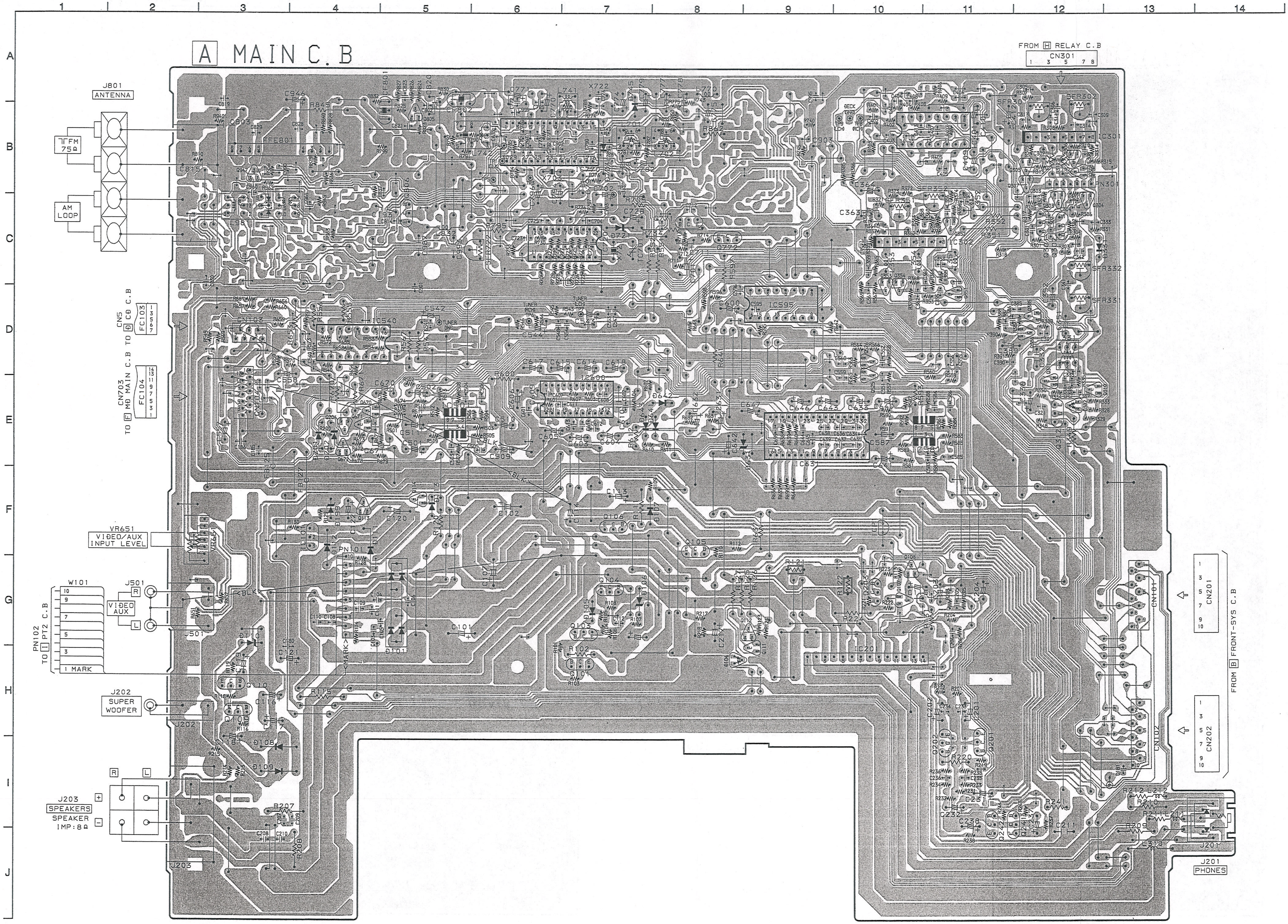
J
Đ CĐ C.B
FROM B FRONT-SYS C.B CN401
FC 402
1 3 5 7 9
U ONLY
CN4
Q82
Q81
Q83
Q84
R91
R93
R95
R97
R96
Q96
Q90
Q92
Q94
Q91
Q95
CN5
IC7
IC1
IC2
IC4
IC6
X1
Đ10
Đ11
Đ12
Đ41
CN3
C1
C71
C72
C73
C74
C75
C80
R1
R47
R48
R70
R73
FROM A MAIN C.B CN103
FC103
7 5 3 1
CN1
1 3 5 7 8
TO PICK UP ASSY
PIN1
CN2
1 3 5 7 8
TO PICK UP ASSY
PIN2
WHITE
RED
M MOTOR-2 C.B
SW1
(OPEN)
SW2
(CLOSE)
M1
(LOADING MOTOR)
PIN4
CN6
5 3 1
YELLOW
L CĐ MOTOR C.B
SW1
(INSIĐE LIMIT SWITCH)
M20
(SPINĐLE MOTOR)
M21
(SLEĐ MOTOR)
CON3
6 5 4 3 2 1
ORG
PICK UP ASSY
VR1
PIN2
PIN1

WIRING – 5 (FRONT – MD)



TO F MD MAIN C.B
CN704
FC101
CN501
CN502
FC102
CN101
R FRONT-CON C.B
C FRONT-MD C.B
FL901
MD DISPLAY
Q904
SW903
SW902
C894
R894
IC892
SW891
C902
SW901
SW911
C924
C927
IC901
C904
C906
C903
SW893
SW892
C905
C907
CN992
CN99
X901
1 3 5 7 9 11 12
CN301
FROM B FRONT-SYS C.B
SW891
▲EJECT
SW911
FUNCTION
SW901
MD JOG
MAX ◀——▶ MIN
1 3 5 7 9 10
CN302
FROM B FRONT-SYS C.B
SW903
EDIT
SW902
DISPLAY
SW893
MD REC
SW892
SYNCHRO REC
CD ▶ MD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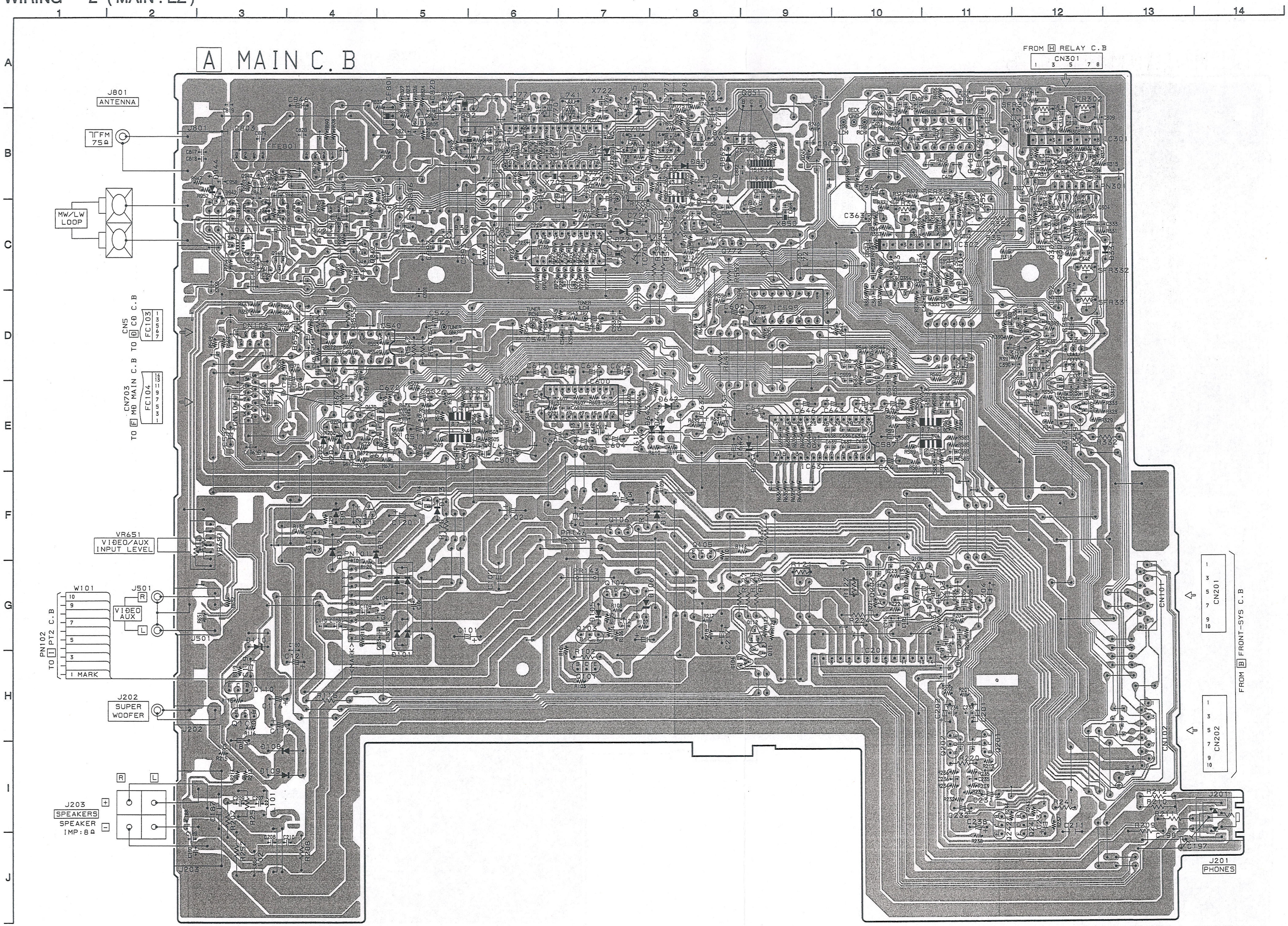
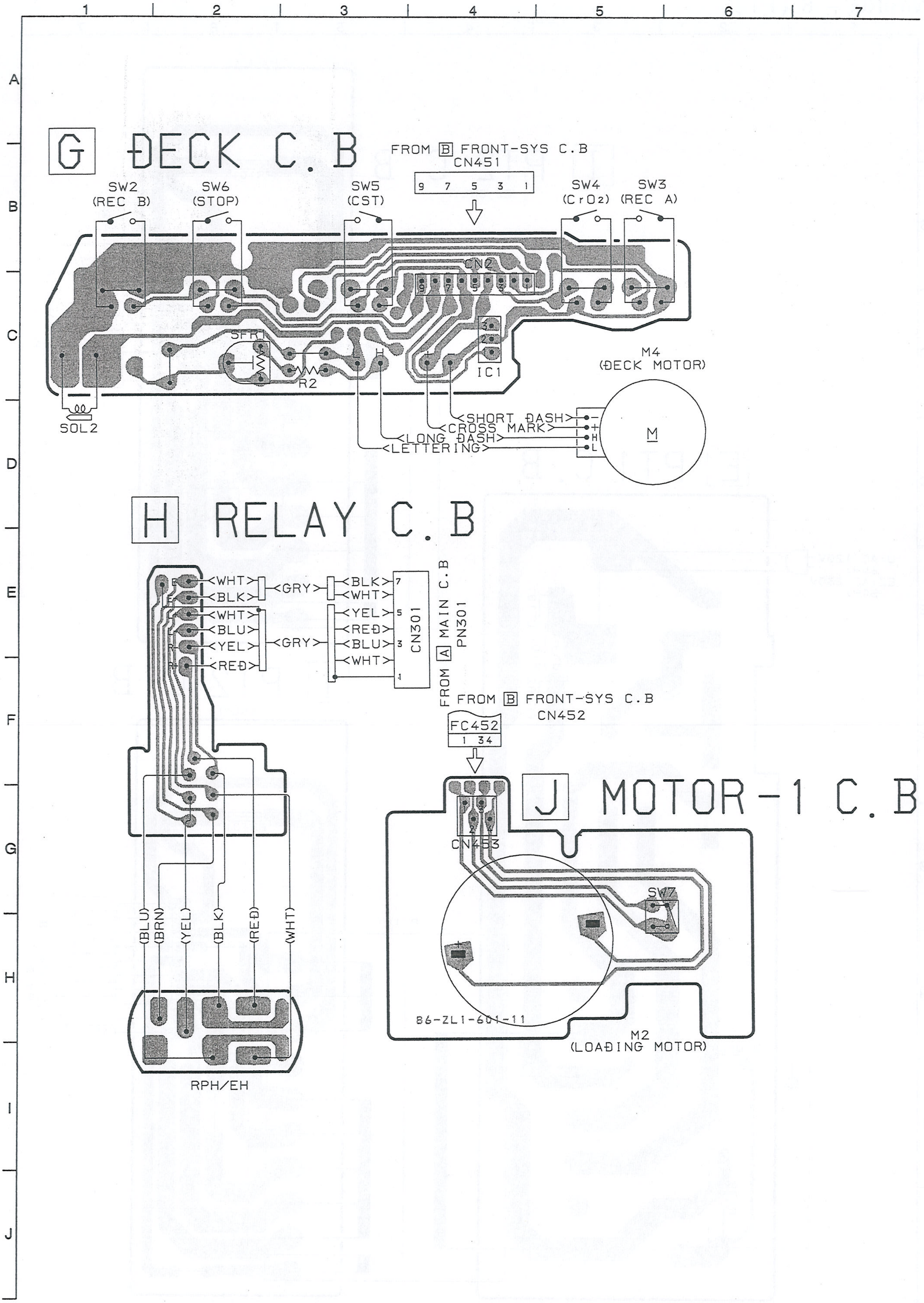
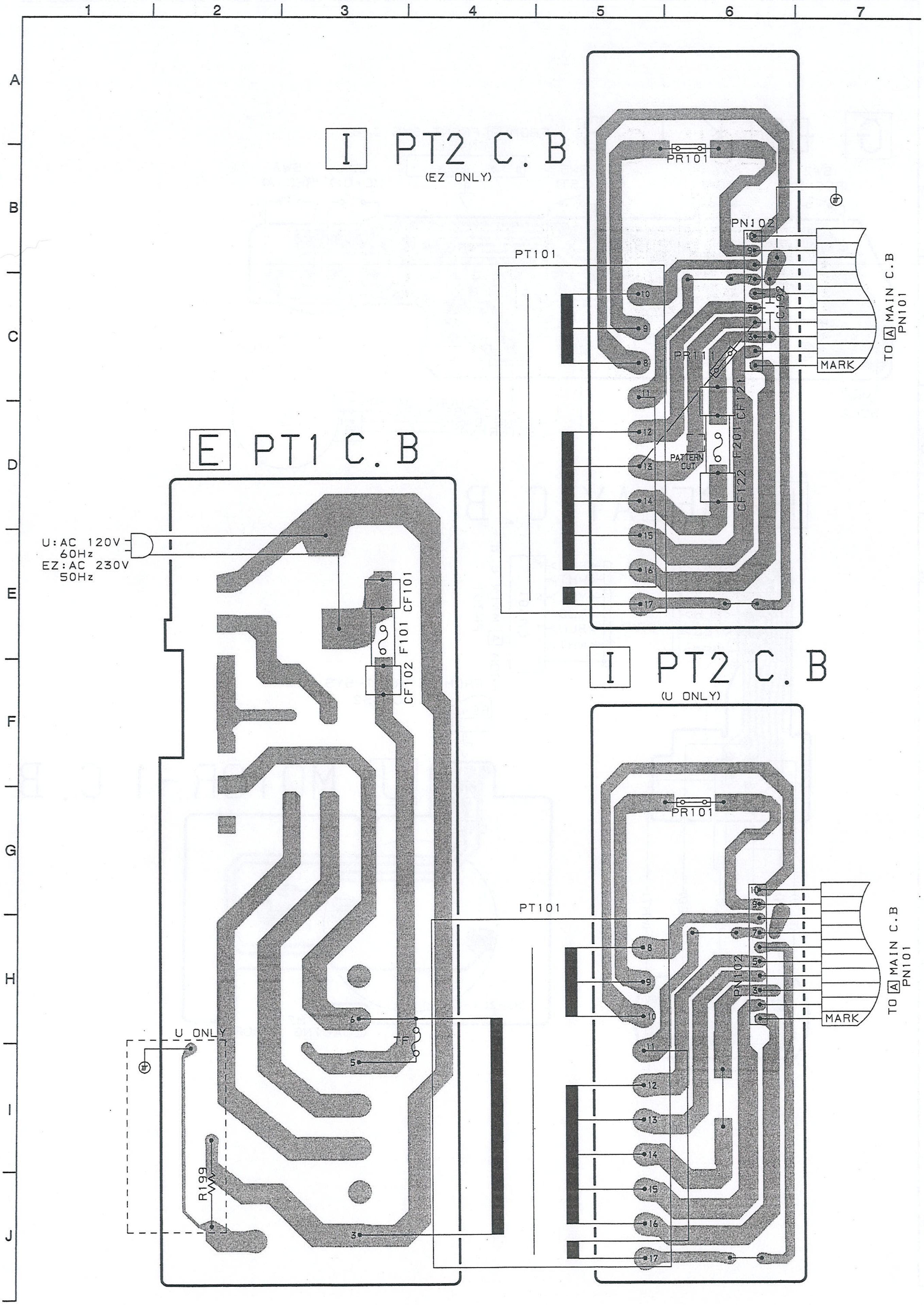
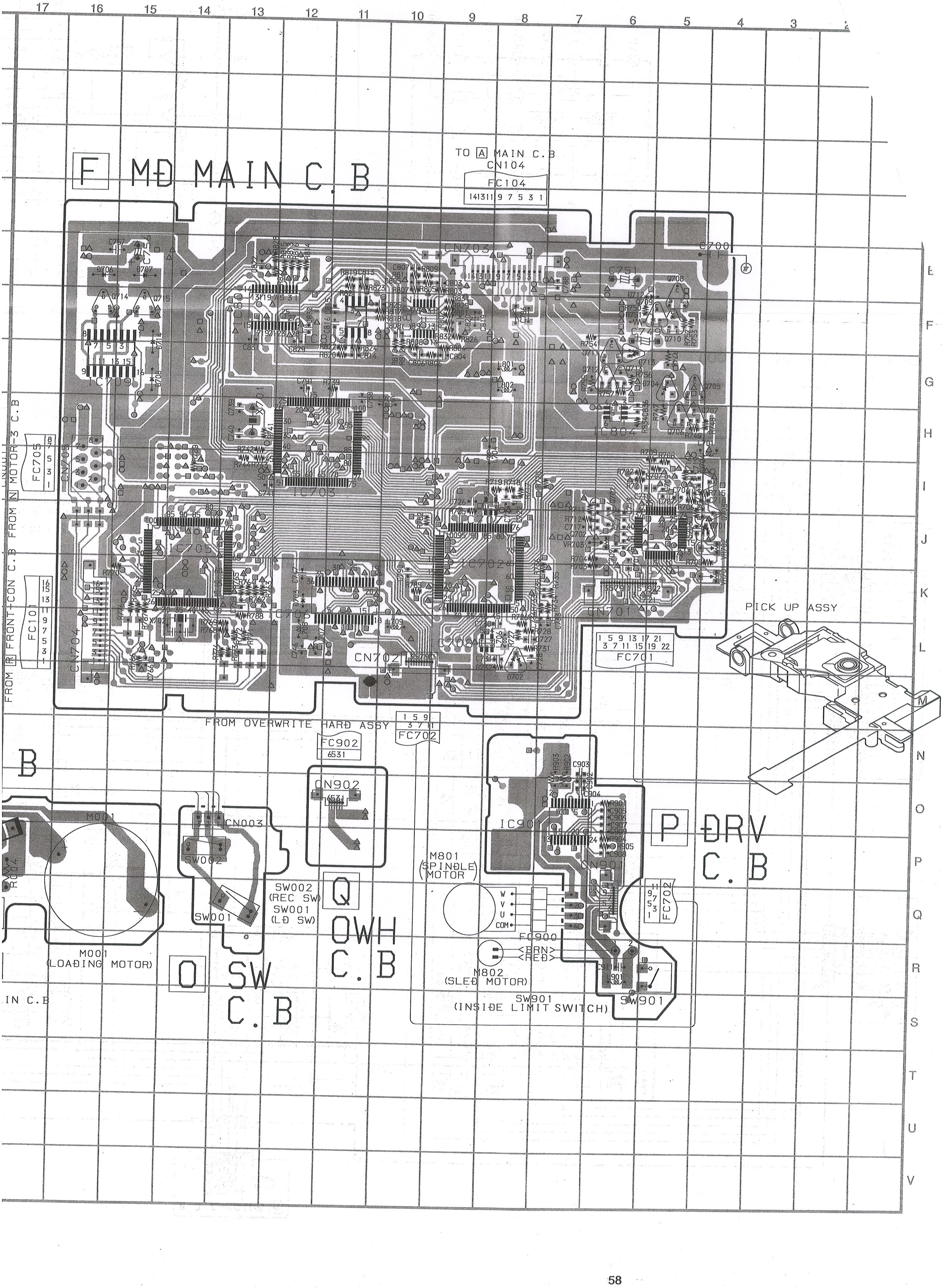
J
A MAIN C.B
FROM H RELAY C.B
CN301
1 3 5 7 8
J801
ANTENNA
FM 75Ω
AM LOOP
CN5 TO B CD C.B
FC103
1 3 5 7
CN703 TO E MD MAIN C.B
FC104
15 13 11 9 7 5 3 1
VR651
VIDEO/AUX INPUT LEVEL
W101
10 9 7 5 3 1 MARK
PN102 TO I PT2 C.B
J501
R
VIDEO AUX
L
J202
SUPER WOOFER
R
L
J203
SPEAKERS
SPEAKER IMP: 8Ω
+
−
CN201
1 3 5 7 9 10
CN202
1 3 5 7 9 10
FROM B FRONT-SYS C.B
CN101
CN102
J201
PHONES
IC301
IC302
IC540
IC595
IC600
IC631
IC201
PN101
PN301
BLK
MARK

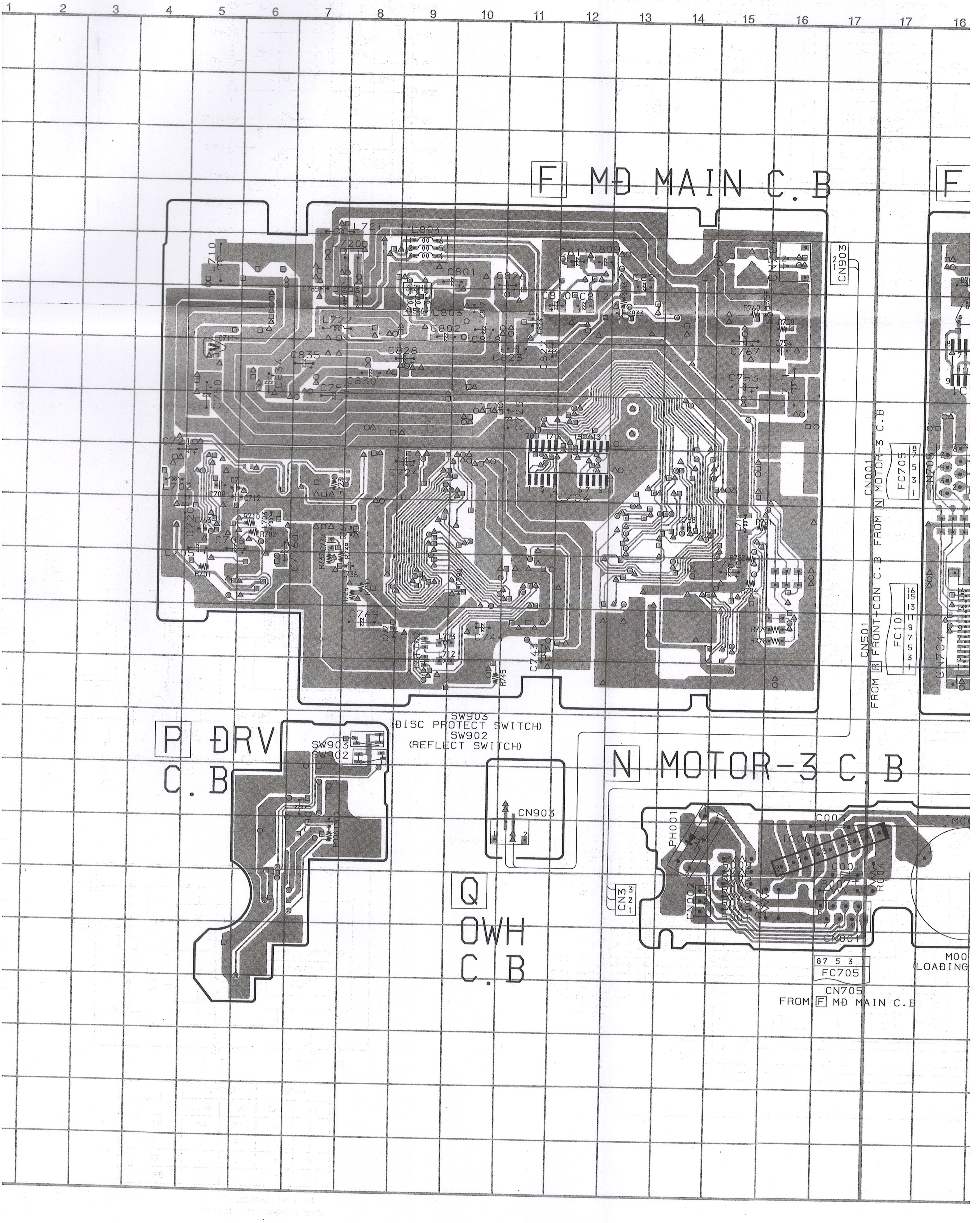

A MAIN C.B
J801
ANTENNA
FM 75Ω
MW/LW LOOP
CN5 TO D CD C.B
FC103
CN703 TO F MD MAIN C.B
FC104
VR651
VIDEO/AUX INPUT LEVEL
W101
PN102 TO I PT2 C.B
1 MARK
J501
R
VIDEO AUX
L
J202
SUPER WOOFER
J203
SPEAKERS
SPEAKER IMP: 8Ω
FROM H RELAY C.B
CN301
CN201
CN202
FROM B FRONT-SYS C.B
J201
PHONES
IC540
IC600
IC595
IC631
IC301
IC302
CN101
CN102
IC201

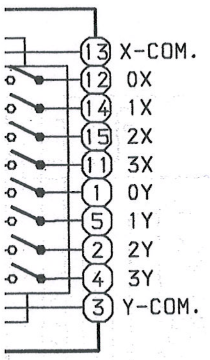

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
G DECK C.B
FROM B FRONT-SYS C.B
CN451
9 7 5 3 1
SW2 (REC B)
SW6 (STOP)
SW5 (CST)
SW4 (CrO2)
SW3 (REC A)
CN2
9 7 5 3 1
SFR1
R2
IC1
3 2 1
SOL2
M4 (DECK MOTOR)
SHORT DASH
CROSS MARK
LONG DASH
LETTERING
– + H L
M
H RELAY C.B
WHT
BLK
WHT
BLU
YEL
RED
GRY
GRY
BLK
WHT
YEL
RED
BLU
WHT
7 5 3 1
CN301
FROM A MAIN C.B PN301
(BLU)
(BRN)
(YEL)
(BLK)
(RED)
(WHT)
RPH/EH
FROM B FRONT-SYS C.B
CN452
FC452
1 34
J MOTOR-1 C.B
CN453
SW7
86-ZL1-601-11
M2 (LOADING MOTOR)

WIRING – 8 (PT)


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
I PT2 C.B
(EZ ONLY)
PR101
PN102
PT101
C102
PR111
CF121
F201
CF122
PATTERN CUT
MARK
TO A MAIN C.B PN101
E PT1 C.B
U:AC 120V 60Hz
EZ:AC 230V 50Hz
CF101
F101
CF102
TF
U ONLY
R199
I PT2 C.B
(U ONLY)
PR101
PT101
PN102
MARK
TO A MAIN C.B PN101

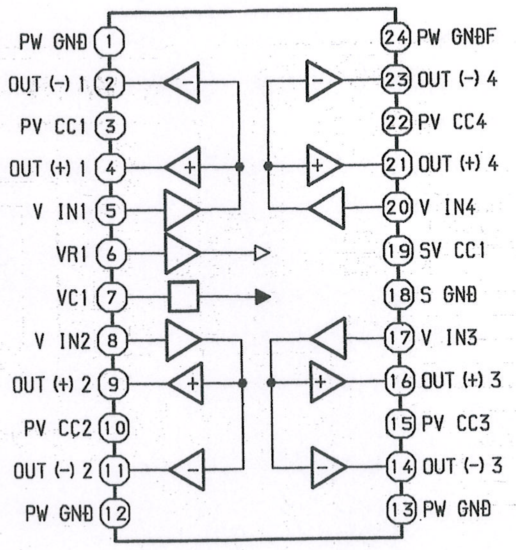

F MD MAIN C.B
TO A MAIN C.B CN104
FC104
14 13 11 9 7 5 3 1
CN703
CN705
FC705
8 7 5 3 1
FROM N MOTOR-3 C.B CN001
FROM R FRONT-CON C.B
FC101
16 15 13 11 9 7 5 3 1
CN704
IC709
IC703
IC705
IC702
IC707
IC804
CN701
FC701
1 5 9 13 17 21
3 7 11 15 19 22
CN702
FROM OVERWRITE HARD ASSY
FC702
1 5 9
3 7 11
FC902
6531
PICK UP ASSY
CN902
Q OWH C.B
P DRV C.B
IC901
CN901
M801 (SPINDLE MOTOR)
W V U COM
FC900
<BRN> <RED>
M802 (SLED MOTOR)
SW901 (INSIDE LIMIT SWITCH)
SW901
FC702
11 9 7 5 3 1
CN003
SW002
SW001
SW002 (REC SW)
SW001 (LD SW)
O SW C.B
M001
M001 (LOADING MOTOR)
B
IN C.B
17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2
E F G H I J K L M N O P Q R S T U V

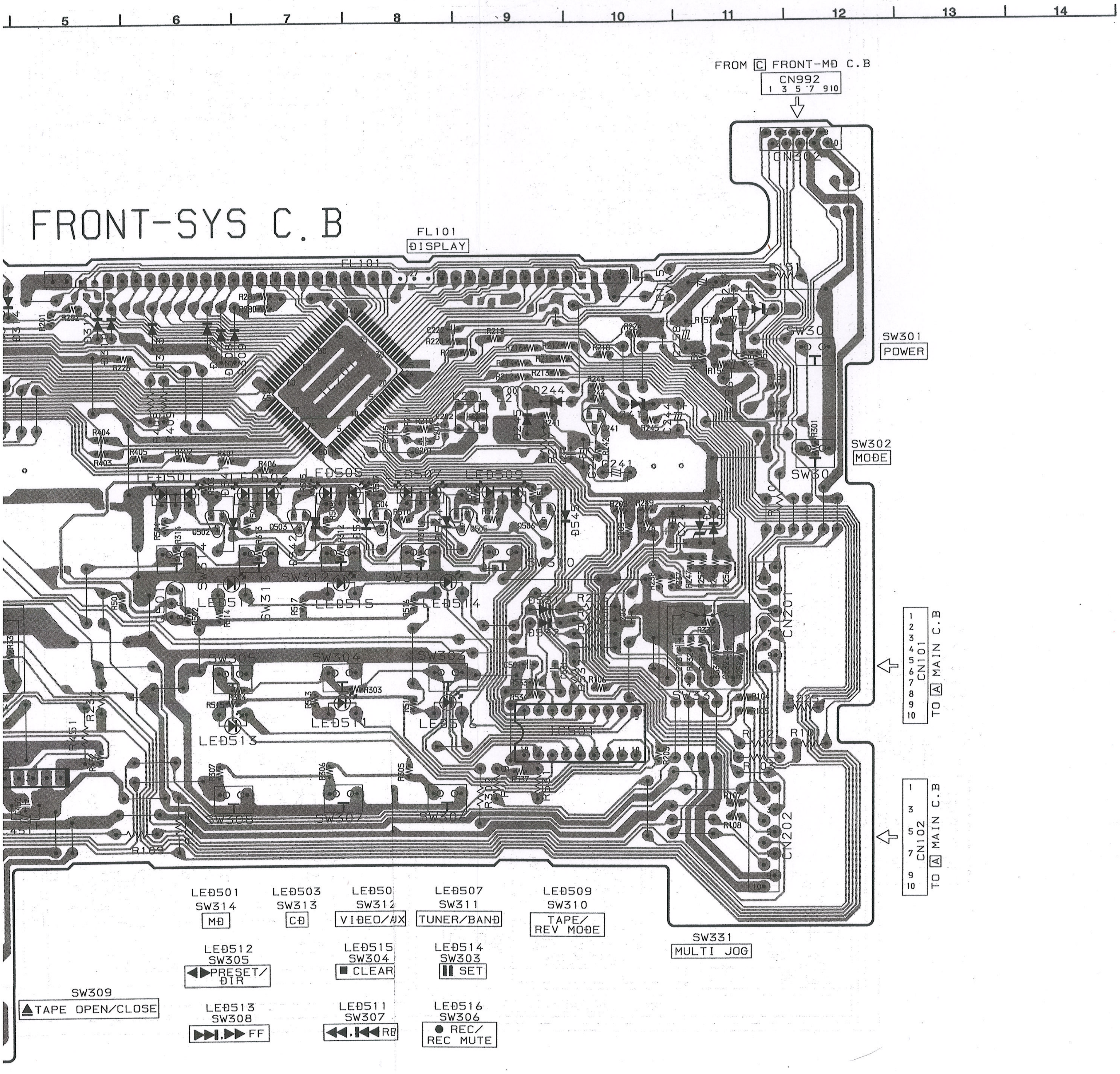

F MD MAIN C.B
P DRV C.B
Q OWH C.B
N MOTOR-3 C.B
SW903 (DISC PROTECT SWITCH)
SW902 (REFLECT SWITCH)
SW903
SW902
CN903
CN903
CN3
PH001
CN002
CN001
C003
C001
R004
FC705
CN705
FROM F MD MAIN C.B
CN501
FROM R FRONT-CON C.B
FC101
CN001
FROM N MOTOR-3 C.B
FC705
CN705
CN704
CN706
IC704
L710
L720
L721
L722
L804
L803
C801
C802
C826
C828
C835
C834
C830
C750
C752
C725
C724
C809
C811
C810
C812
C821
C827
C823
C767
C753
C744
C743
C769
R745
MOO (LOADING
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 16


13 X-COM.
12 0X
14 1X
15 2X
11 3X
1 0Y
5 1Y
2 2Y
4 3Y
3 Y-COM.

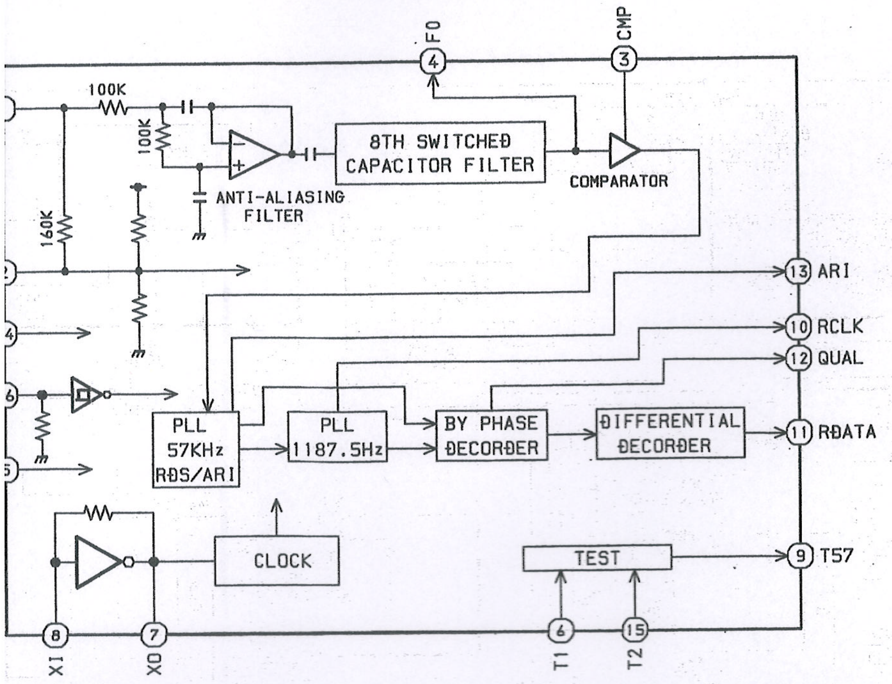
ON SWITCH	
Y0	X0
Y1	X1
Y2	X2
Y3	X3
–	–

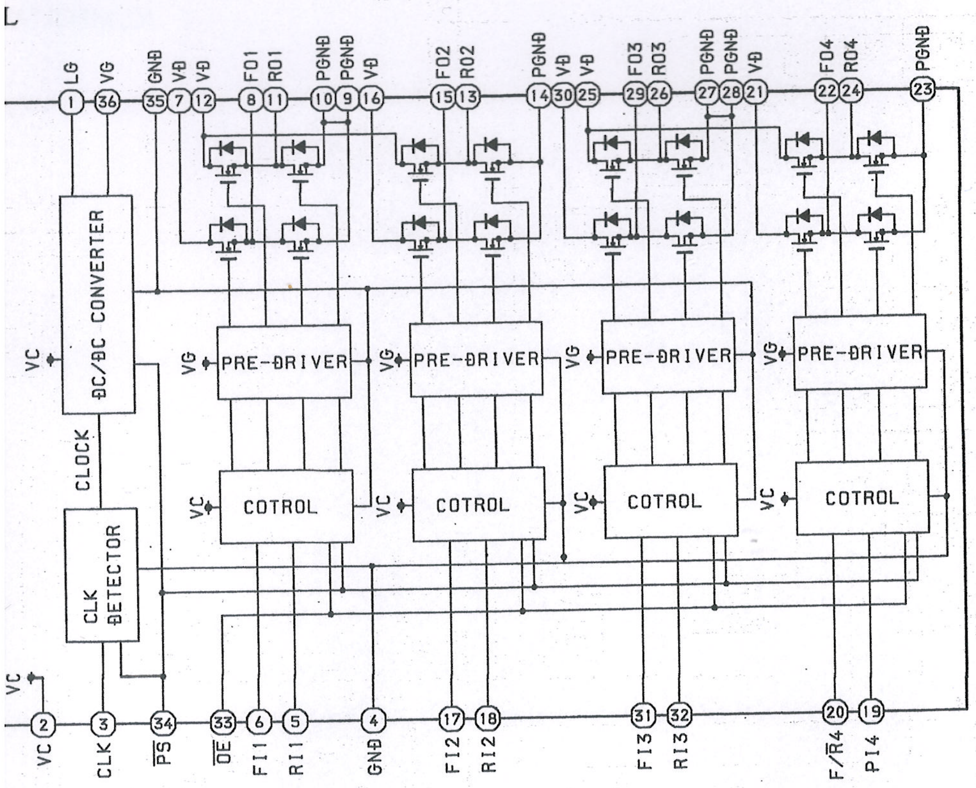
IC, TA2092N


PW GNĐ 1
OUT (-) 1 2
PV CC1 3
OUT (+) 1 4
V IN1 5
VR1 6
VC1 7
V IN2 8
OUT (+) 2 9
PV CC2 10
OUT (-) 2 11
PW GNĐ 12
24 PW GNĐF
23 OUT (-) 4
22 PV CC4
21 OUT (+) 4
20 V IN4
19 SV CC1
18 S GNĐ
17 V IN3
16 OUT (+) 3
15 PV CC3
14 OUT (-) 3
13 PW GNĐ


5
6
7
8
9
10
11
12
13
14
FRONT-SYS C.B
FROM C FRONT-MĐ C.B
CN992
1 3 5 7 9 10
CN302
FL101
ĐISPLAY
SW301
POWER
SW302
MOĐE
CN201
CN202
1 2 3 4 5 6 7 8 9 10
CN101
TO A MAIN C.B
1 3 5 7 9 10
CN102
TO A MAIN C.B
LEĐ501
SW314
MĐ
LEĐ503
SW313
CĐ
LEĐ50
SW312
VIĐEO/AUX
LEĐ507
SW311
TUNER/BANĐ
LEĐ509
SW310
TAPE/
REV MOĐE
SW331
MULTI JOG
LEĐ512
SW305
◀▶PRESET/
ĐIR
LEĐ515
SW304
■ CLEAR
LEĐ514
SW303
II SET
SW309
▲TAPE OPEN/CLOSE
LEĐ513
SW308
▶▶I,▶▶ FF
LEĐ511
SW307
◀◀,I◀◀ RE
LEĐ516
SW306
● REC/
REC MUTE

GRAM- 1


FO
CMP
100K
100K
160K
8TH SWITCHED CAPACITOR FILTER
COMPARATOR
ANTI-ALIASING FILTER
ARI
RCLK
QUAL
RDATA
T57
PLL 57KHz RDS/ARI
PLL 1187.5Hz
BY PHASE DECORDER
DIFFERENTIAL DECORDER
CLOCK
TEST
XI
XO
T1
T2


L
LG
VG
GND
VD
FO1
RO1
PGND
FO2
RO2
FO3
RO3
FO4
RO4
VC
DC/DC CONVERTER
CLOCK
CLK DETECTOR
PRE-DRIVER
COTROL
VC
CLK
PS
OE
FI1
RI1
GND
FI2
RI2
FI3
RI3
F/R4
PI4

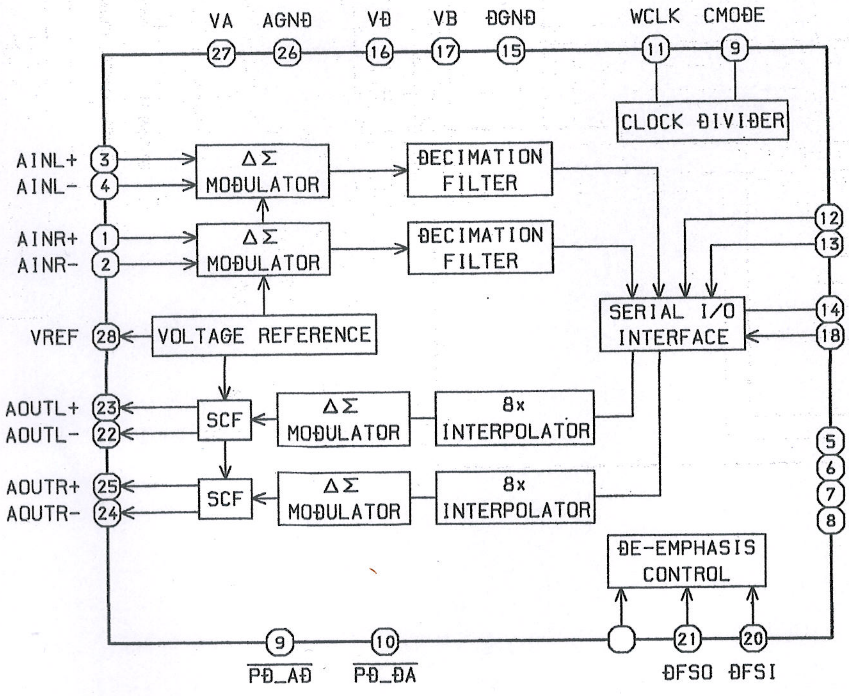
CLOCK DETECTOR

CLK	$\overline{PS}$	OSCILLATOR
X	H	AUTOMATIC
1OLK	H	SYNCHRONIZE
X	L	STOP

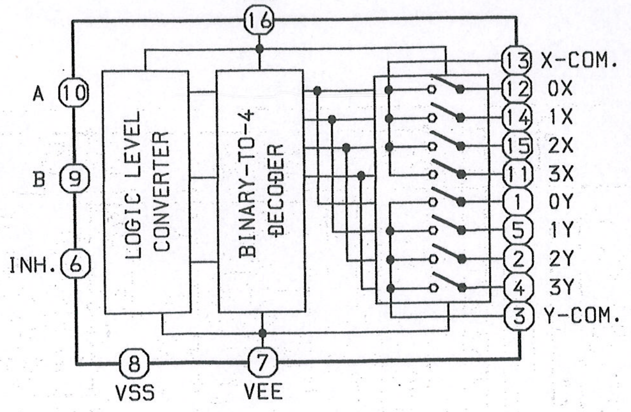
DRIVER

$\overline{PS}$, $\overline{OE}$		INPUT		OUTPUT1∼3		OUTPUT4	
$\overline{PS}$	$\overline{OE}$	FI. F/$\overline{RI}$	RI. PI	FO	RO	FO	RO
H	L	L	L	L	L	L	L
H	L	L	H	L	H	L	H
H	L	H	L	H	L	L	L
H	L	H	H	L	L	H	L
H	H	X	X	L	L	L	L
L	X	X	X	Z	Z	Z	Z

※Z:HIGH IMPEDANCE
※$\overline{PS}$:STOP ALL CIRCUIT FUNCTION
※$\overline{OE}$:H BRIDGE OUTPUT IS LOW


VA
AGND
VD
VB
DGND
WCLK
CMODE
CLOCK DIVIDER
AINL+
AINL-
AINR+
AINR-
ΔΣ MODULATOR
DECIMATION FILTER
L/R
SCLK
SDTO
SDTI
VREF
VOLTAGE REFERENCE
SERIAL I/O INTERFACE
AOUTL+
AOUTL-
AOUTR+
AOUTR-
SCF
8x INTERPOLATOR
TST1
TST2
TST3
TST4
DE-EMPHASIS CONTROL
PD_AD
PD_DA
DFSO
DFSI

IC, TC4052BP

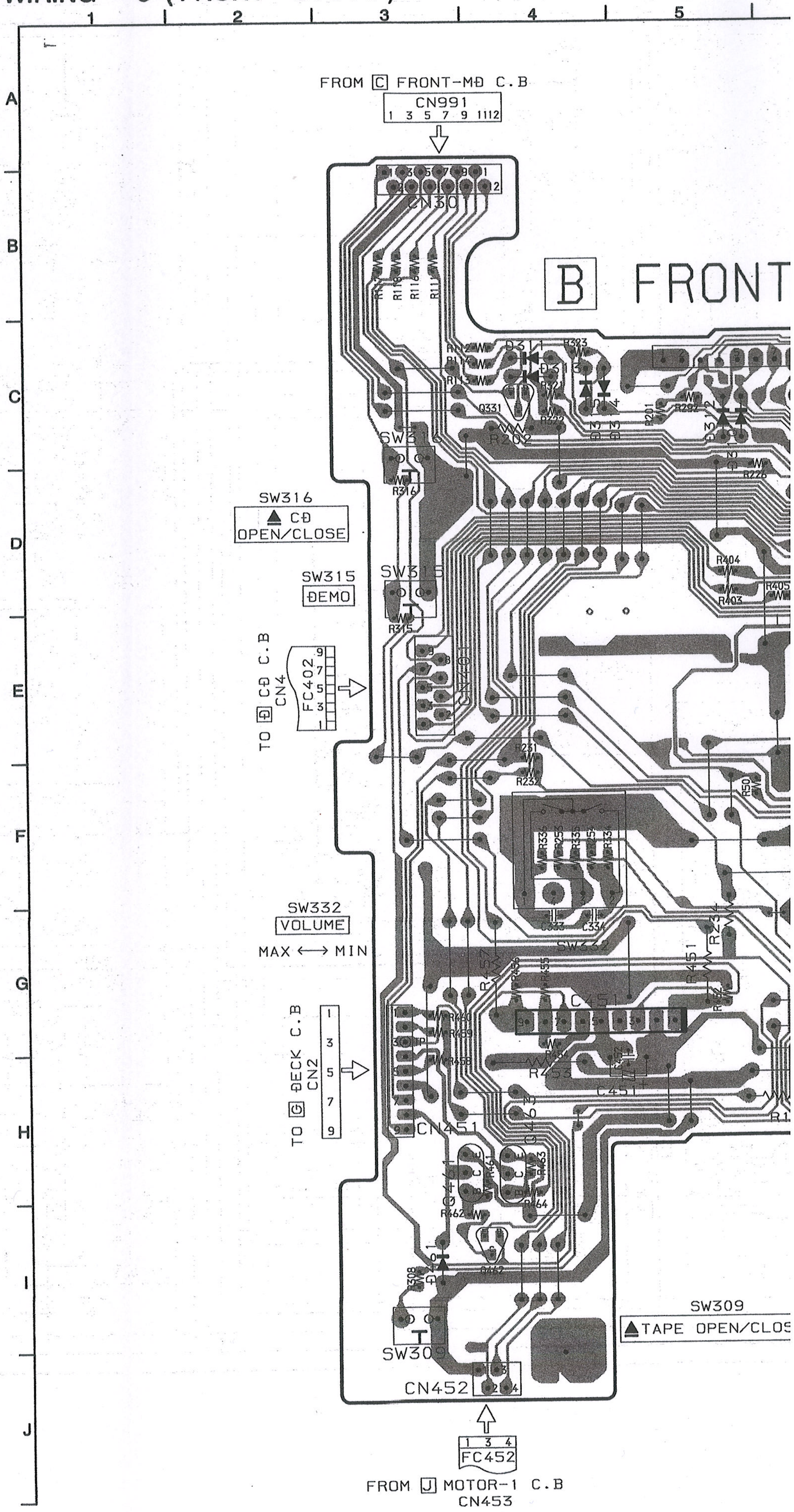

VDD
A
B
INH.
LOGIC LEVEL CONVERTER
BINARY-TO-4 DECODER
X-COM.
0X
1X
2X
3X
0Y
1Y
2Y
3Y
Y-COM.
VSS
VEE

TRUTH TABLE

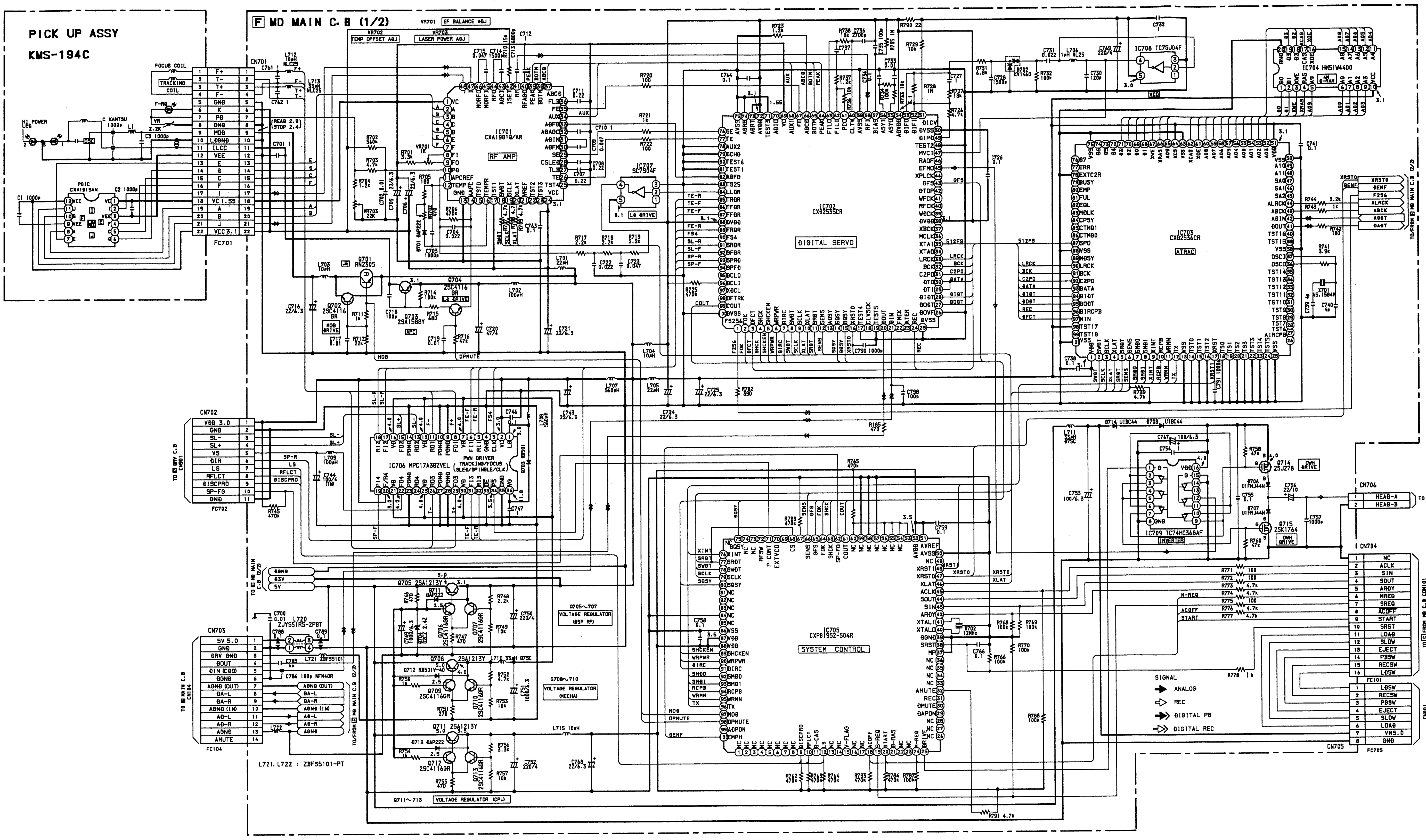
CONTROL INPUTS			ON SWITCH	
INHIBIT	B	A		
L	L	L	Y0	X0
L	L	H	Y1	X1
L	H	L	Y2	X2
L	H	H	Y3	X3
H	X	X	—	—

L:LOW LEVEL
H:HIGH LEVEL
H:IRRELEVANT

WIRING – 3 (FRONT – SYS : U)

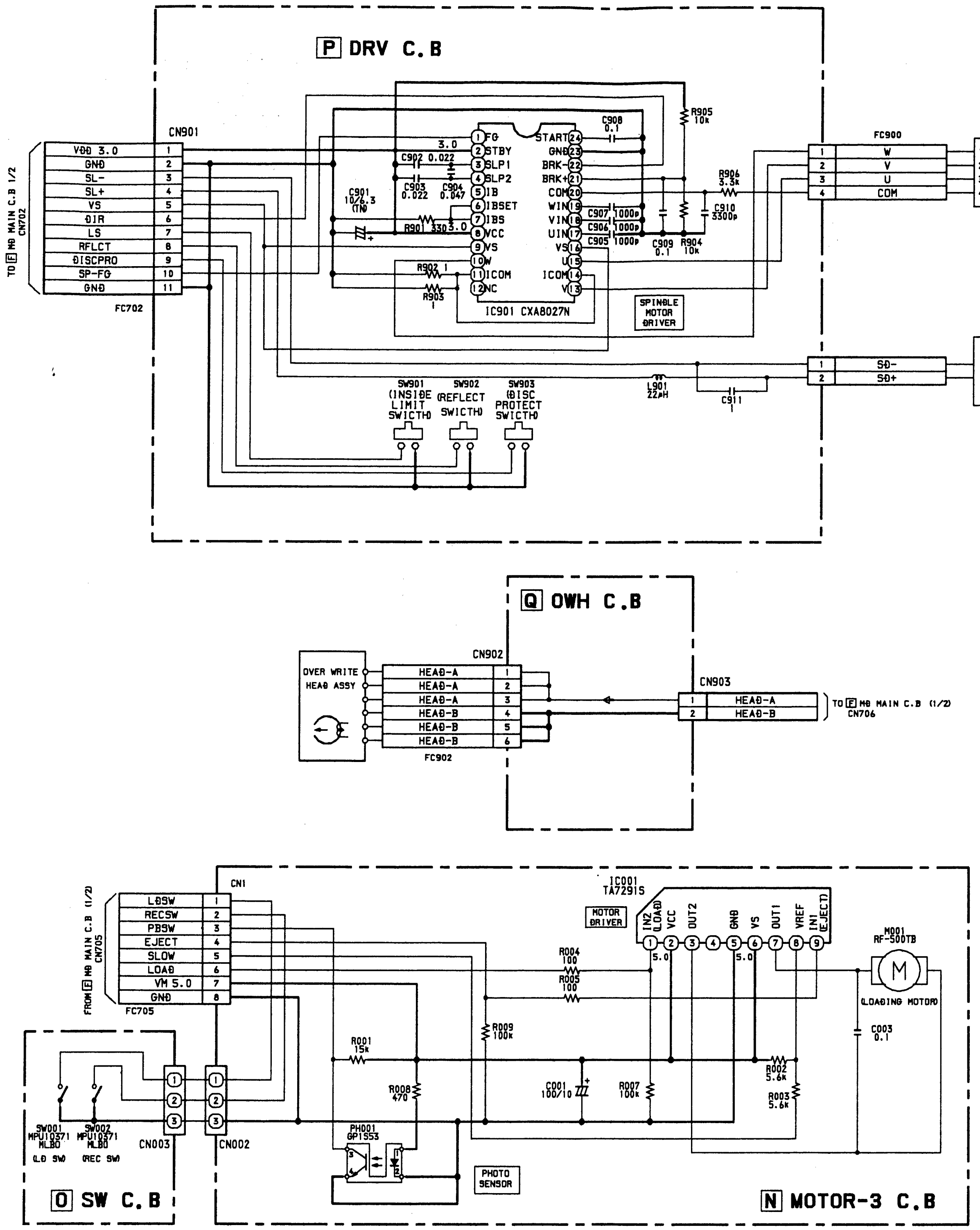

1
2
3
4
5
A
B
C
D
E
F
G
H
I
J
FROM C FRONT-MD C.B
CN991
1 3 5 7 9 11 12
CN301
B FRONT
SW316
▲ CD OPEN/CLOSE
SW315
DEMO
TO D CD C.B
CN4
FC402
CN401
SW332
VOLUME
MAX ⟷ MIN
TO G DECK C.B
CN2
CN451
SW309
▲TAPE OPEN/CLOS
SW308
CN452
FC452
FROM J MOTOR-1 C.B
CN453

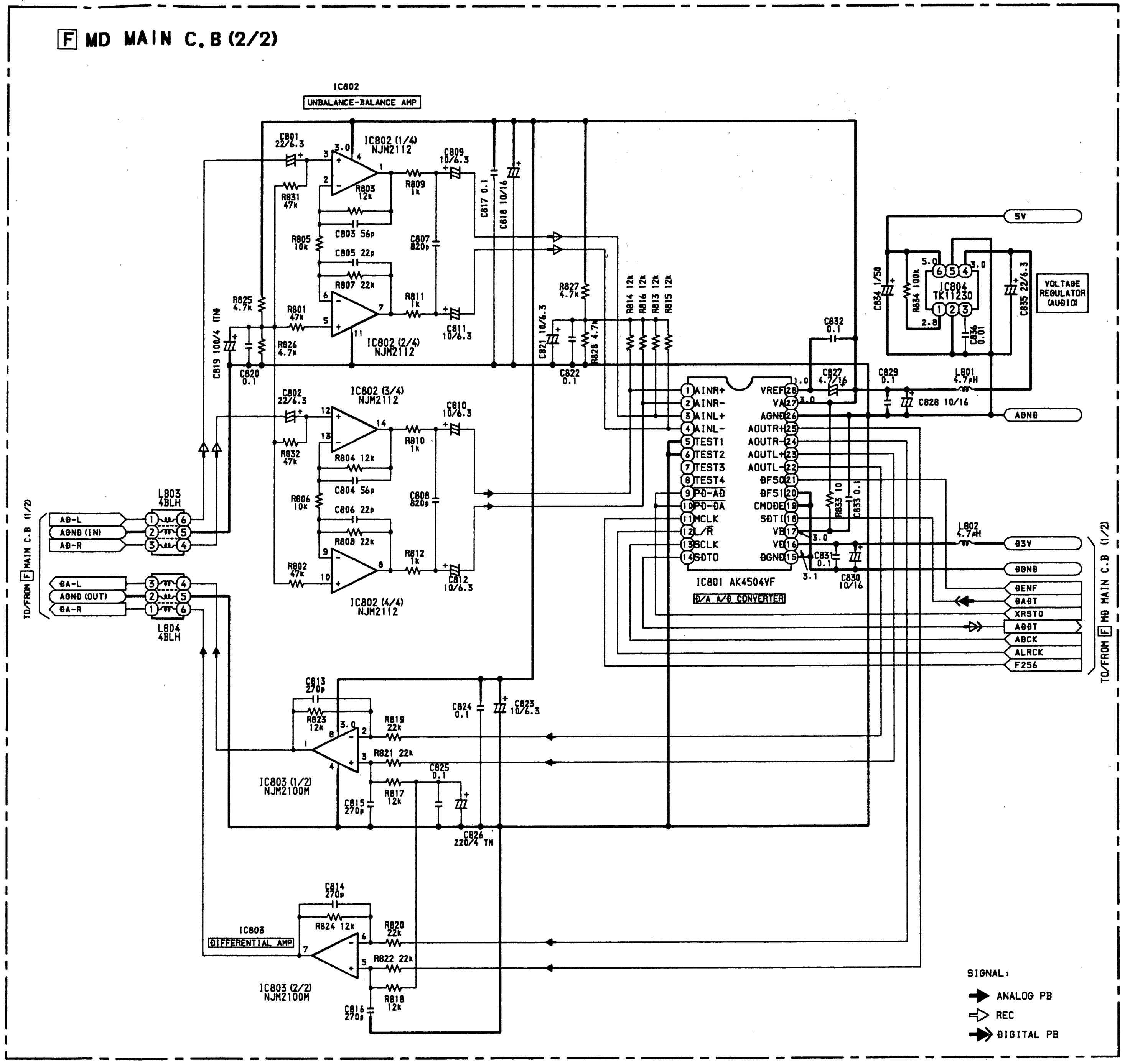
SCHEMATIC DIAGRAM – 7 (MD 1/2)



PICK UP ASSY
KMS-194C
F MD MAIN C.B (1/2)
CN701
FC701
IC701 CXA1981Q/AR
RF AMP
IC702 CXD2535CR
DIGITAL SERVO
IC703 CXD2536CR
ATRAC
IC704 HM51W4400
IC706 MPC17A38ZVEL
PWM DRIVER TRACKING/FOCUS (SLED/SPINDLE/CLK)
IC705 CXP81952-504R
SYSTEM CONTROL
IC707 SC7S04F
LD DRIVE
IC708 TC7SU04F
VCO
IC709 TC74HC368AF
INVERTER
Q701 RN2305
Q704 2SC4116
LD DRIVE
Q703 2SA1588Y
APC
Q702 2SC4116
MOD DRIVE
Q705~707 VOLTAGE REGULATOR (DSP RF)
Q708~710 VOLTAGE REGULATOR (MECHA)
Q711~713 VOLTAGE REGULATOR (CPU)
Q714 2SJ278
Q715 2SK1764
OWH DRIVE
CN702
FC702
CN703
FC104
CN704
CN705
FC705
CN706
TO OWH C.B CN903
L721, L722 : ZBFS5101-PT
SIGNAL
ANALOG
REC
DIGITAL PB
DIGITAL REC

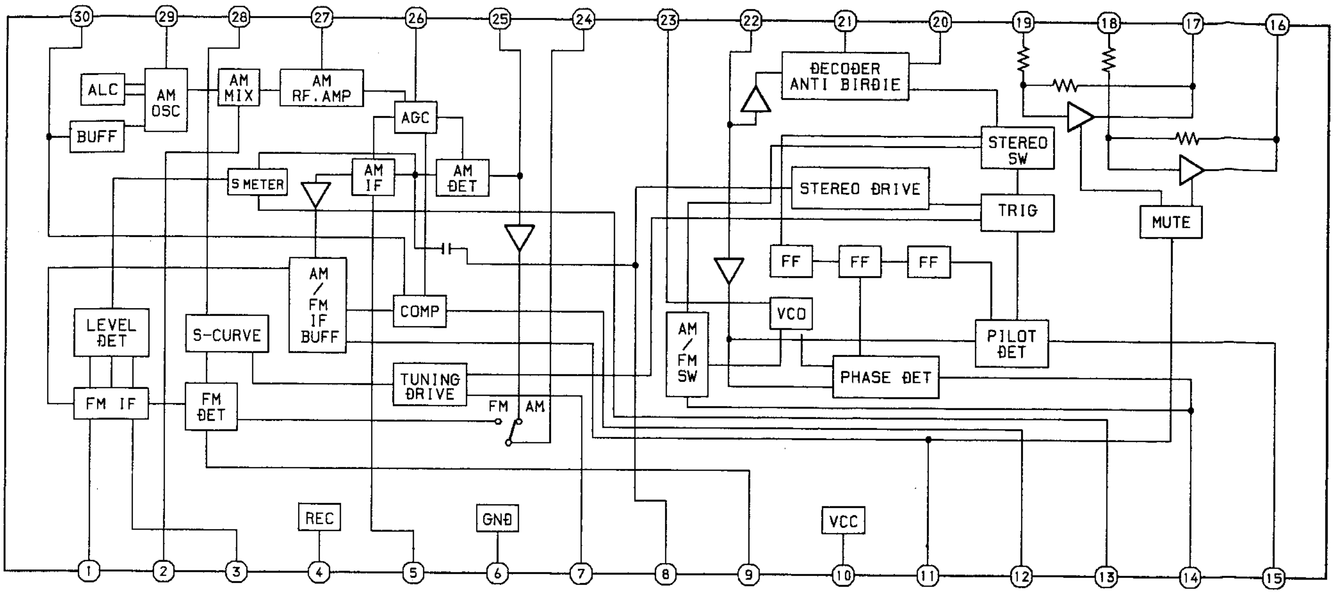
SCHEMATIC DIAGRAM – 8 (MD 2/2)


P DRV C.B
CN901
TO F MD MAIN C.B 1/2 CN702
VDD 3.0
GND
SL-
SL+
VS
DIR
LS
RFLCT
DISCPRO
SP-FG
GND
FC702
IC901 CXA8027N
FG
STBY
SLP1
SLP2
IB
IBSET
IBS
VCC
VS
DW
ICOM
NC
START
GND
BRK-
BRK+
COM
WIN
VIN
UIN
VS
U
ICOM
V
SPINDLE MOTOR DRIVER
R905 10k
C908 0.1
R904 3.3k
C910 3300p
C907 1000p
C906 1000p
C905 1000p
C909 0.1
R904 10k
C902 0.022
C903 0.022
C904 0.047
C901 10/6.3 (TN)
R901 330
R902 1
R903 1
FC900
W
V
U
COM
M801 (SPINDLE MOTOR)
M802 (SLED MOTOR)
SD-
SD+
L901 22μH
C911
SW901 (INSIDE LIMIT SWITCH)
SW902 (REFLECT SWITCH)
SW903 (DISC PROTECT SWITCH)
Q OWH C.B
CN902
OVER WRITE HEAD ASSY
HEAD-A
HEAD-A
HEAD-A
HEAD-B
HEAD-B
HEAD-B
FC902
CN903
HEAD-A
HEAD-B
TO F MD MAIN C.B (1/2) CN706
CN1
FROM F MD MAIN C.B (1/2) CN705
LDSW
RECSW
PBSW
EJECT
SLOW
LOAD
VM 5.0
GND
FC705
IC001 TA7291S
MOTOR DRIVER
IN2 (LOAD)
VCC
OUT2
GND
VS
OUT1
VREF
IN1 (EJECT)
M001 RF-500TB
(LOADING MOTOR)
C003 0.1
R004 100
R005 100
R009 100k
R001 15k
R008 470
C001 100/10
R007 100k
R002 5.6k
R003 5.6k
PH001 GP1S53
PHOTO SENSOR
SW001 MPU10371 MLB0 (LD SW)
SW002 MPU10371 MLB0 (REC SW)
CN003
CN002
O SW C.B
N MOTOR-3 C.B


F MD MAIN C.B (2/2)
IC802
UNBALANCE-BALANCE AMP
IC802 (1/4) NJM2112
IC802 (2/4) NJM2112
IC802 (3/4) NJM2112
IC802 (4/4) NJM2112
C801 22/6.3
C802 22/6.3
R831 47k
R832 47k
R803 12k
R804 12k
C803 56p
C804 56p
C805 22p
C806 22p
R805 10k
R806 10k
R807 22k
R808 22k
R801 47k
R802 47k
R824 4.7k
R825 4.7k
R826 4.7k
R809 1k
R810 1k
R811 1k
R812 1k
C807 820p
C808 820p
C809 10/6.3
C810 10/6.3
C811 10/6.3
C812 10/6.3
C817 0.1
C818 10/16
C819 100/4 (TN)
C820 0.1
C821 10/6.3
C822 0.1
R827 4.7k
R828 4.7k
R814 12k
R816 12k
R813 12k
R815 12k
L803 4BLH
L804 4BLH
TO/FROM F MAIN C.B (1/2)
AD-L
AGND (IN)
AD-R
DA-L
AGND (OUT)
DA-R
IC801 AK4504VF
D/A A/D CONVERTER
AINR+
AINR-
AINL+
AINL-
TEST1
TEST2
TEST3
TEST4
PD-AD
PD-DA
MCLK
L/R
SCLK
SDTO
VREF
VA
AGND
AOUTR+
AOUTR-
AOUTL+
AOUTL-
DFS0
DFS1
CMODE
SDTI
VD
DGND
C832 0.1
C827 4.7/16
C829 0.1
C828 10/16
L801 4.7μH
C833 0.1
C831 0.1
R833 10
C830 10/16
L802 4.7μH
5V
AGND
D3V
DGND
DENF
DADT
XRSTO
ADDT
ABCK
ALRCK
F256
TO/FROM F MAIN C.B (1/2)
IC804 TK11230
C834 1/50
R834 100k
C836 0.01
C835 22/6.3
VOLTAGE REGULATOR (AUDIO)
C813 270p
C814 270p
C815 270p
C816 270p
R823 12k
R824 12k
R819 22k
R820 22k
R821 22k
R822 22k
R817 12k
R818 12k
C824 0.1
C823 10/6.3
C825 0.1
C826 220/4 TN
IC803 (1/2) NJM2100M
IC803 (2/2) NJM2100M
IC803
DIFFERENTIAL AMP
SIGNAL:
ANALOG PB
REC
DIGITAL PB

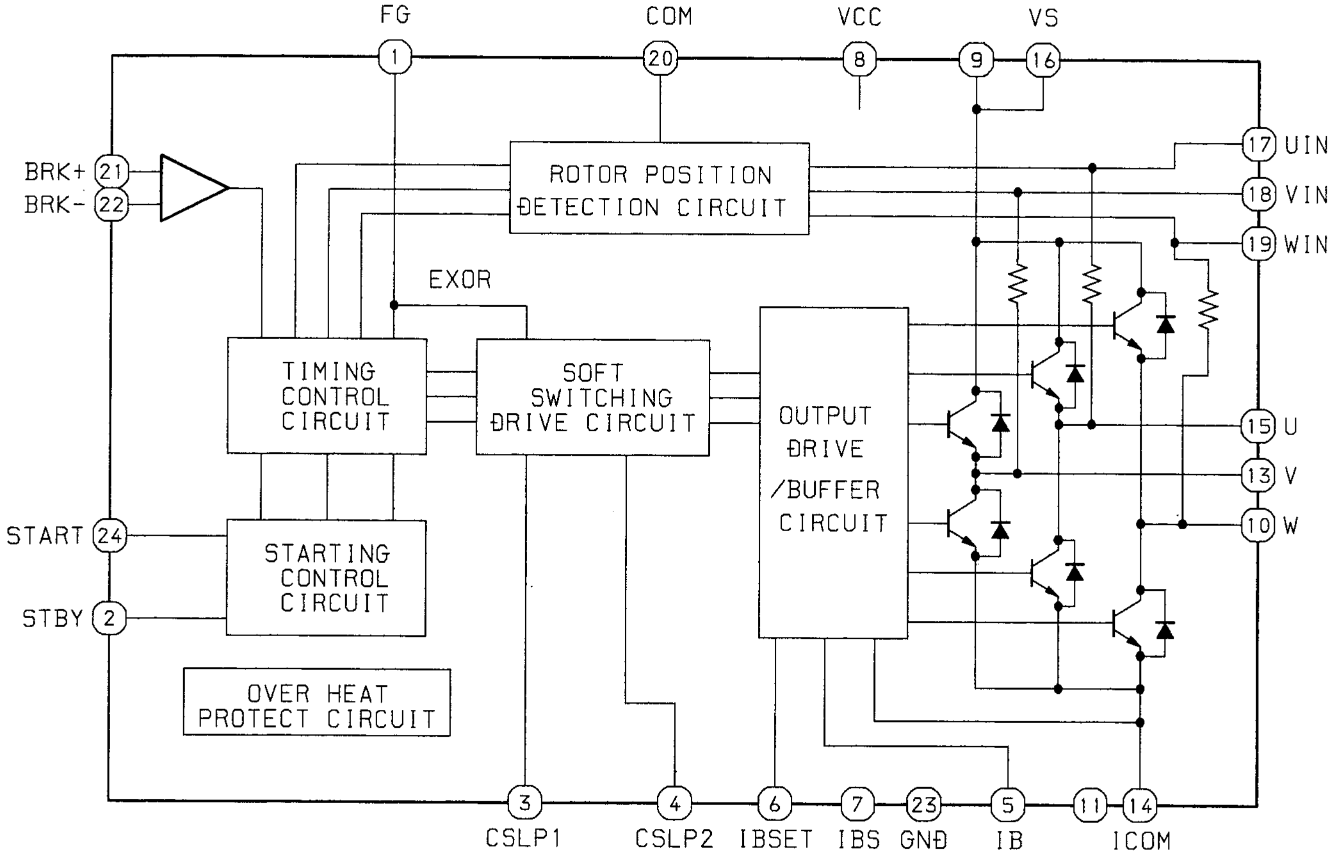
IC BLOCK DIAGRAM – 3

IC, LA1836L



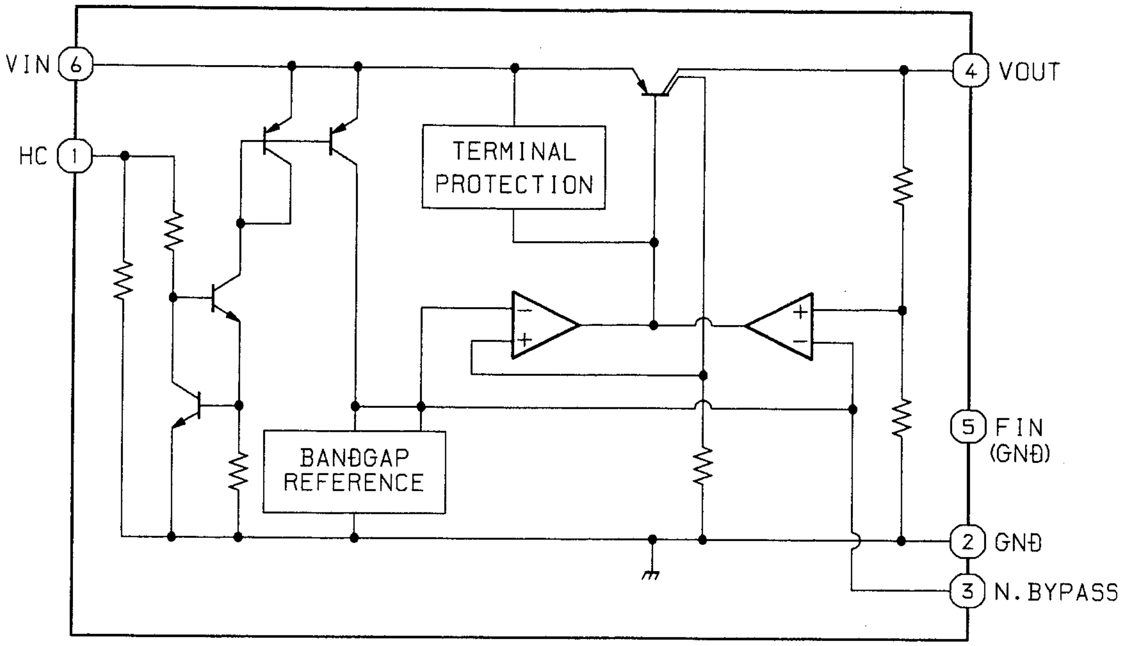
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
ALC
AM OSC
BUFF
AM MIX
AM RF.AMP
AGC
S METER
AM IF
AM DET
DECODER ANTI BIRDIE
STEREO SW
STEREO DRIVE
TRIG
MUTE
FF
FF
FF
VCO
AM / FM SW
PILOT DET
PHASE DET
LEVEL DET
S-CURVE
AM / FM IF BUFF
COMP
TUNING DRIVE
FM IF
FM DET
FM
AM
REC
GND
VCC
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

IC, CXA8027N

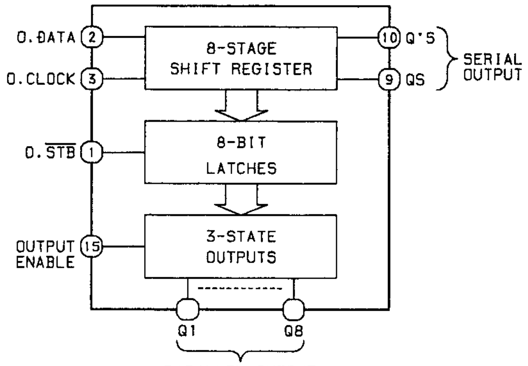


FG
COM
VCC
VS
1
20
8
9
16
BRK+
21
BRK-
22
ROTOR POSITION DETECTION CIRCUIT
17 UIN
18 VIN
19 WIN
EXOR
TIMING CONTROL CIRCUIT
SOFT SWITCHING DRIVE CIRCUIT
OUTPUT DRIVE /BUFFER CIRCUIT
15 U
13 V
10 W
START
24
STBY
2
STARTING CONTROL CIRCUIT
OVER HEAT PROTECT CIRCUIT
3
CSLP1
4
CSLP2
6
IBSET
7
IBS
23
GND
5
IB
11
14
ICOM

IC, TK11230M


VIN 6
HC 1
TERMINAL PROTECTION
BANDGAP REFERENCE
4 VOUT
5 FIN (GND)
2 GND
3 N.BYPASS

IC, BU4094BCF


O.DATA 2
O.CLOCK 3
O.$\overline{\text{STB}}$ 1
OUTPUT ENABLE 15
8-STAGE SHIFT REGISTER
8-BIT LATCHES
3-STATE OUTPUTS
10 Q'S
9 QS
SERIAL OUTPUT
Q1
Q8
PARALLEL OUTPUT

Q1:O.DOLBY ON
Q2:O.DOLBY C
Q3:O.EXT.REC
Q4:O.INT.REC
Q5:O.PLAY
Q6:O.PB2
Q7:O.LED
Q8:O.$\overline{\text{RMT}}$

TRUTH TABLE

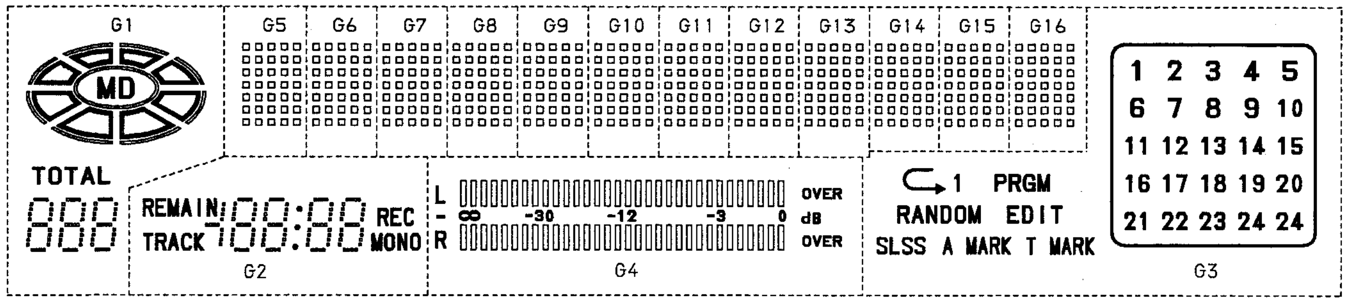
CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	QS	Q'S
↑	L	X	X	Z	Z	Q7	NO CHG.
↓	L	X	X	Z	Z	NO CHG.	QS
↑	H	L	X	NO CHG.	NO CHG.	Q7	NO CHG.
↑	H	H	L	L	Qn-1	Q7	NO CHG.
↑	H	H	H	H	Qn-1	Q7	NO CHG.
↓	H	X	X	NO CHG.	NO CHG.	NO CHG.	QS

Z = HIGH IMPEDANCE
X = DON'T CARE

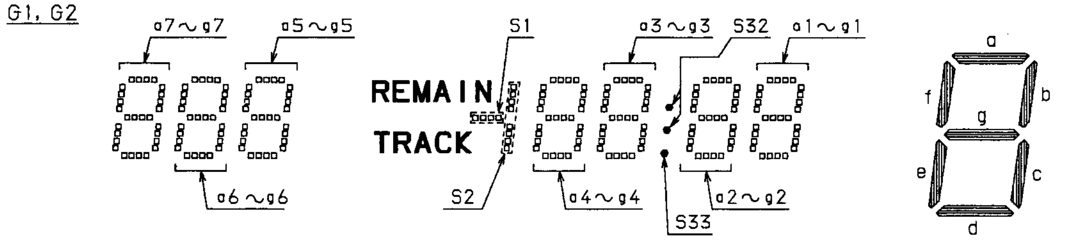
FL GRID ASSIGNMENT & ANODE CONNECTION

FL, CM1532C

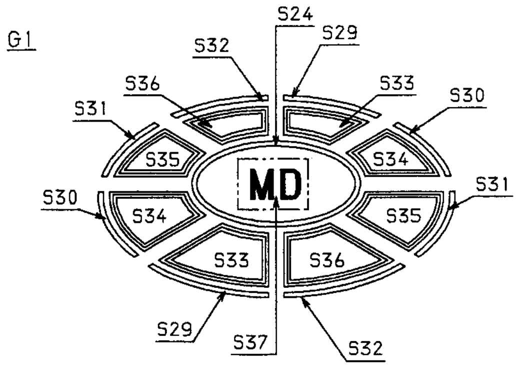
GRID ASSIGNMENT


G1
G5
G6
G7
G8
G9
G10
G11
G12
G13
G14
G15
G16
MD
TOTAL
REMAIN
TRACK
REC
MONO
G2
L
R
OVER
dB
-∞
-30
-12
-3
0
G4
1 PRGM
RANDOM EDIT
SLSS A MARK T MARK
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
21 22 23 24 24
G3

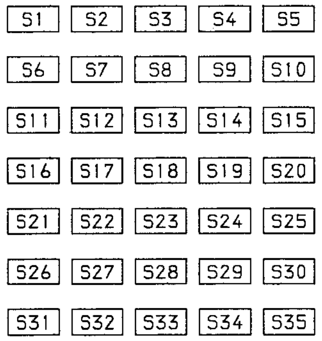
G1, G2

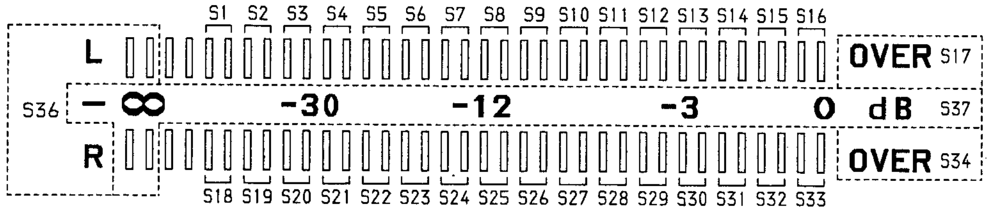

a7~g7
a5~g5
a6~g6
S1
a3~g3
S32
a1~g1
REMAIN
TRACK
S2
a4~g4
S33
a2~g2
a
b
c
d
e
f
g

G1

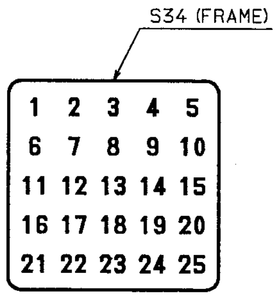

S24
S32
S29
S36
S33
S30
S31
S35
S34
S31
S30
MD
S34
S35
S33
S36
S29
S37
S32

G5~G16


S1 S2 S3 S4 S5
S6 S7 S8 S9 S10
S11 S12 S13 S14 S15
S16 S17 S18 S19 S20
S21 S22 S23 S24 S25
S26 S27 S28 S29 S30
S31 S32 S33 S34 S35


S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16
L
OVER S17
S36
-∞
-30
-12
-3
0
dB S37
R
OVER S34
S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 S28 S29 S30 S31 S32 S33

G4


S34 (FRAME)
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
21 22 23 24 25

G3

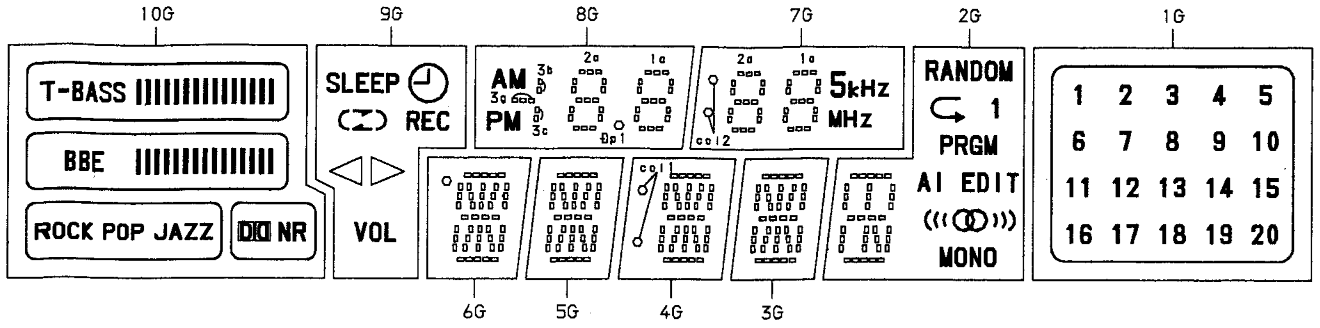
ANODE CONNECTION

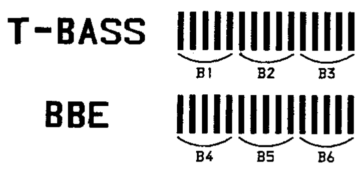
	G1	G2	G3	G4	G5~G16
S1	TOTAL	□□□□	1	S1	S1
S2		|	2	S2	S2
S3	a7	a4	3	S3	S3
S4	b7	b4	4	S4	S4
S5	c7	c4	5	S5	S5
S6	d7	d4	6	S6	S6
S7	e7	e4	7	S7	S7
S8	f7	f4	8	S8	S8
S9	g7	g4	9	S9	S9
S10	a6	a3	10	S10	S10
S11	b6	b3	11	S11	S11
S12	c6	c3	12	S12	S12
S13	d6	d3	13	S13	S13
S14	e6	e3	14	S14	S14
S15	f6	f3	15	S15	S15
S16	g6	g3	16	S16	S16
S17	a5	a2	17	S17	S17
S18	b5	b2	18	S18	S18
S19	c5	c2	19	S19	S19

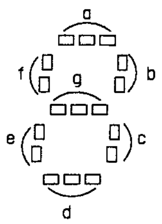
	G1	G2	G3	G4	G5~G16
S20	d5	d2	20	S20	S20
S21	e5	e2	21	S21	S21
S22	f5	f2	22	S22	S22
S23	g5	g2	23	S23	S23
S24	⬭	a1	24	S24	S24
S25		b1	25	S25	S25
S26		c1	↪	S26	S26
S27		d1	1	S27	S27
S28		e1	PROG	S28	S28
S29	S29	f1	RANDOM	S29	S29
S30	S30	g1	EDIT	S30	S30
S31	S31	REC	SLSS	S31	S31
S32	S32	∘ ∘	A MARK	S32	S32
S33	S33	∘	T MARK	S33	S33
S34	S34	REMAIN	(FRAME)	S34	S34
S35	S35	MONO			S35
S36	S36	TRACK		S36	
S37	MD			S37	

FL, BJ508GK (U)

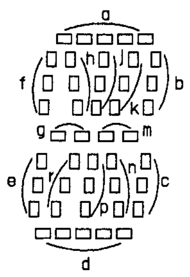
GRID ASSIGNMENT

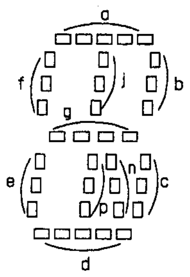

10G
9G
8G
7G
2G
1G
T-BASS
BBE
ROCK POP JAZZ
DD NR
SLEEP
REC
VOL
AM
PM
5kHz
MHz
RANDOM
PRGM
AI EDIT
MONO
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
6G
5G
4G
3G


T-BASS
BBE
B1
B2
B3
B4
B5
B6
[10G]

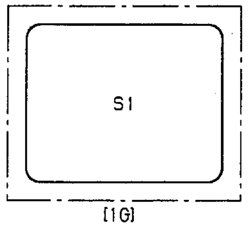


[10G, 9G]


a
b
c
d
e
f
g
j
k
m
[6G~3G]



[2G]



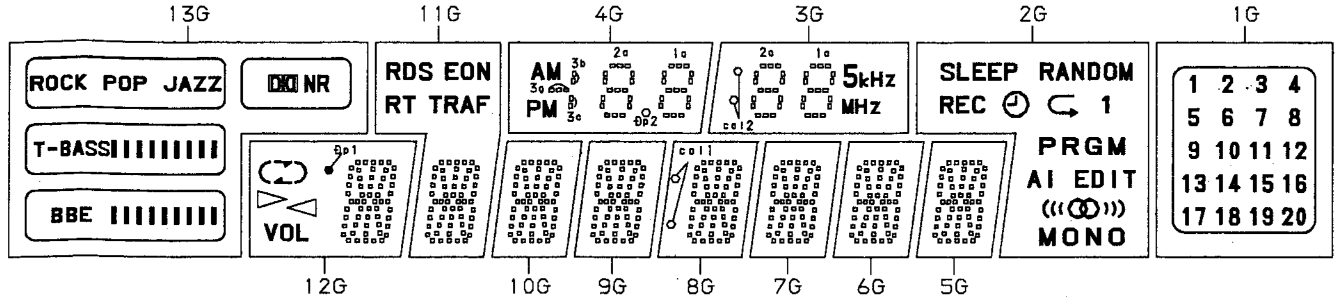
[1G]

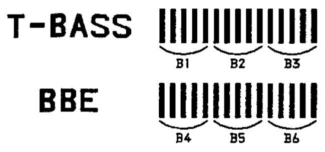
ANODE CONNECTION

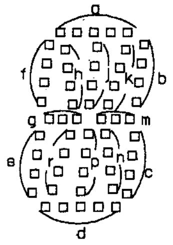
	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	B1	◁	1d	1d	○	—	col 1 (UP)	—	**RANDOM**	**1**
P2	B2	▷	1e	1e	a	a	a	a	a	**2**
P3	B3	(	1c	1c	h	h	h	h	↪	**3**
P4	**T-BASS**	⇌	1g	1g	j	j	j	j	**1**	**4**
P5	(T-BASS)	)	1f	1f	k	k	k	k	**PRGM**	**5**
P6	B4	**REC**	1b	1b	b	b	b	b	b	**6**
P7	B5	◷	1a	1a	f	f	f	f	f	**7**
P8	B6	**SLEEP**	2d	2d	m	m	m	m	g	**8**
P9	**BBE**	—	2e	2e	g	g	g	g	**AI**	**9**
P10	(BBE)	—	2c	2c	c	c	c	c	**EDIT**	**10**
P11	**ROCK**	—	2g	2g	e	e	e	e	e	**11**
P12	**POP**	—	2f	2f	r	r	r	r	((⊚))	**12**
P13	**JAZZ**	—	2b	2b	p	p	p	p	**MONO**	**13**
P14	(ROCK~JAZZ)	**VOL**	2a	2a	n	n	n	n	n	**14**
P15	**DD NR**	—	—	—	d	d	d	d	p	**15**
P16	(NR)	—	Ðp	col 2 (ÐOWN)	—	—	col 1 (ÐOWN)	—	c	**16**
P17	—	—	**PM**	col 2 (UP)	—	—	—	—	d	**17**
P18	—	—	**AM**	**5**	—	—	—	—	—	**18**
P19	—	—	3g	**kHz**	—	—	—	—	—	**19**
P20	—	—	3b, 3c	**MHz**	—	—	—	—	j	**20**
P21	—	—	—	—	—	—	—	—	—	S1

FL, BJ544GK (EZ)

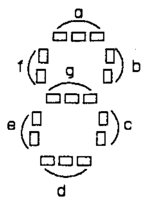
GRID ASSIGNMENT


13G
11G
4G
3G
2G
1G
ROCK POP JAZZ
DD NR
RDS EON
RT TRAF
AM
PM
5kHz
MHz
SLEEP RANDOM
REC
1
T-BASS
BBE
VOL
PRGM
AI EDIT
MONO
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
17 18 19 20
12G
10G
9G
8G
7G
6G
5G

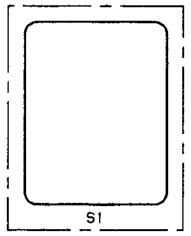

T-BASS
BBE
B1
B2
B3
B4
B5
B6
[13G]



[12G~5G]



[4G, 3G]



[1G]

ANODE CONNECTION

	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	**ROCK**	Ðp 1	—	—	—	col 1 (UP)	—	—	—	1d	1d	**SLEEP**	**1**
P2	**POP**	a	a	a	a	a	a	a	a	1e	1e	**REC**	**2**
P3	**JAZZ**	h	h	h	h	h	h	h	h	1c	1c	◷	**3**
P4	(ROCK POP JAZZ)	j	j	j	j	j	j	j	j	1g	1g	**RANDOM**	**4**
P5	B1	k	k	k	k	k	k	k	k	1f	1f	↪	**5**
P6	B2	b	b	b	b	b	b	b	b	1b	1b	**1**	**6**
P7	B3	f	f	f	f	f	f	f	f	1a	1a	**PRGM**	**7**
P8	**T-BASS**	m	m	m	m	m	m	m	m	2d	2d	**AI**	**8**
P9	(T-BASS)	g	g	g	g	g	g	g	g	2e	2e	**EDIT**	**9**
P10	B4	c	c	c	c	c	c	c	c	2c	2c	(((⊚)))	**10**
P11	B5	e	e	e	e	e	e	e	e	2g	2g	**MONO**	**11**
P12	B6	r	r	r	r	r	r	r	r	2f	2f	—	**12**
P13	**BBE**	p	p	p	p	p	p	p	p	2b	2b	—	**13**
P14	(BBE)	n	n	n	n	n	n	n	n	2a	2a	—	**14**
P15	**DD NR**	d	d	d	d	d	d	d	d	—	—	—	**15**
P16	(NR)	(	**RDS**	—	—	col 1 (ÐOWN)	—	—	—	Ðp 2	col 2 (ÐOWN)	—	**16**
P17	—	⇌	**EON**	—	—	—	—	—	—	**AM**	col 2 (UP)	—	**17**
P18	—	)	**RT**	—	—	—	—	—	—	**PM**	**5**	—	**18**
P19	—	▷	**TRAF**	—	—	—	—	—	—	3g	**KHz**	—	**19**
P20	—	◁	—	—	—	—	—	—	—	3b, 3c	**MHz**	—	**20**
P21	—	**VOL**	—	—	—	—	—	—	—	—	—	—	S1

IC DESCRIPTION

IC, LA9240M

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Connected to pickup photo-diode. Positive setting by FIN2 pin generates RF signal, and negative setting does FE signal.
2	FIN1	I	Connected to pickup photo-diode.
3	E	I	Connected to pickup photo-diode.Negative setting by FIN1 pin generates TE signal.
4	F	I	Connected to pickup photo-diode.
5	TB	I	Input DC constituent parts of TE signal.
6	TE–	O	Connected to TE pin with resistor set TE signal gain.
7	TE	O	Output TE signal.
8	TESI	I	Input TES (TRACK ERROR SENCE) comparator. Band pass and input TE signal.
9	SCI	I	Input shock detection.
10	TH	I	Establish tracking gain value.
11	TA	O	TA amplifier output.
12	TD–	I	Compose tracking phase compensation value between TD and VR pins.
13	TD	O	Used for tracking phase compensation setting.
14	JP	I	Establish amplitude of tracking jump signal (kick pulse).
15	TO	O	Output tracking control signal.
16	FD	O	Output focusing control signal.
17	FD–	I	Compose focusing phase compensation value between FD and FA pins.
18	FA	O	Compose focusing phase compensation value between FD- and FA- pins.
19	FA–	I	Compose focusing phase compensation value between FA and FE pins.
20	FE	O	Output FE signal.
21	FE–	I	Connected to TE pin with resistor set FE signal gain.
22	AGND	—	Analog GND.
23	SP	O	Output single-end for CV+ and CV– pins input signal.
24	SPI	I	Spindle amplifier input.
25	SPG	I	Connect resistor for gain setting at spindle 12cm mode.
26	SP-	I	Connect spindle phase compensation value with SPD pin.
27	SPD	O	Output spindle control signal.
28	SLEQ	I	Connect sled phase compensation value.
29	SLD	O	Output sled control signal.
30	SL–	I	Input sled sending signal from microcomputer.
31	SL+		
32	JP–	I	Input tracking jump signal from DSP.
33	JP+		
34	TGL	I	Input tracking gain control signal from DSP. TGL = "H" : gain low.
35	TOFF	I	Input tracking off control signal from DSP. TOFF = "H" : off.
36	TES	O	Output TES signal to DSP.
37	HFL	O	HIGH FREQUENCY LEVEL: detects whether main-beam is on bit or mirror position.
38	SLOF	I	Input sled serbo off control.
39	CLV–	I	Input CLV error signal from DSP.
40	CLV+		
41	RFSM	O	Output RF.
42	RFS–	O	Establish RF gain and 3T compensation value from EFM signal with RFSM pin.
43	SLC	O	SLICE LEVEL CONTROL: control data slice level by DSP with RF wave form.
44	SLI	I	Control data slice level by DSP.
45	DGND	—	Digital GND.
46	FSC	O	Connected to focus search smoothing capacitor.
47	TBC	I	TRACKING BALANCE CONTROL: establish EF balance variable range.
48	NC	—	Not used.
49	DEF	O	Output disk defect detection.
50	CLK	I	Input reference clock. Inputs 4.23 MHz from DSP.
51	CL	I	Input microcomputer command clock.
52	DAT	I	Input microcomputer command data.
53	CE	I	Input microcomputer command chip enables.
54	DRF	O	DETECT RF: Output RF level detection.
55	FSS	I	FOCUS SEARCH SELECT: switches focus search mode (between ± search and ± search against reference voltage).
56	VCC2	—	Servo/digital VCC.
57	REF1	—	Connected to reference voltage by pass condenser.
58	VR	O	Output reference voltage.
59	LF2	—	Establish value in detecting disc defect.
60	PH1	—	Connected to capacitor used to hold peak of RF signal.
61	BH1	—	Connected to capacitor used to hold bottom of RF signal.
62	LDD	O	APC-circuit output pin.
63	LDS	I	APC-circuit input pin.
64	VCC1	—	RF VCC.

IC, LC78622E

Pin No.	Pin Name	I/O	Description
1	DEFI	I	Defect detection signal (DEF) input terminal.
2	TAI	I	PLL test input terminal. Internal pull-down resistance attached. Connected to 0V.
3	PDO	O	Phase comparing output terminal to control external VCO for PLL.
4	VVSS	—	Connected to internal VCO of PLL. Connected to 0V.
5	ISET	I	Connected to resistor adjusted PDO output current for PLL.
6	VVDD	—	Voltage terminal for internal VCO of PLL.
7	FR	I	Adjusts VCO frequency range for PLL.
8	VSS	—	Digital GND. Connected to 0V.
9	EFMO	O	Output EFM signal for slice level control.
10	EFMIN	I	Input EFM signal for slice level control.
11	TEST2	I	Test input terminal. Internal pull-down resistance attached. Connected to 0V terminal.
12	CLV+	O	Output disk motor control. Tristate output.
13	CLV-		
14	V/-P	O	Automatic switching monitor output for rough servo/phase control.When "H", output rough servo, when "L", output phase control.
15	HFL	I	Input track detection signal. Schumit-trigger input.
16	TES	I	Input tracking error signal. Schumit-trigger input.
17	TOFF	O	Output tracking OFF.
18	TGL	O	Output tracking gain switching. When "H", gain is raised.
19	JP+	O	Output track jump control. Tristate output.
20	JP-		
21	PCK	O	Clock monitor terminal for playback EFM data. 4.3218MHz at phase locked.
22	FSEQ	O	Output detection of synchronized signal. "Hi": when a synchronization signal from EFM signal is coincident with the internally generated.
23	VDD	—	Supply digital voltage.
24~28	CONT1~CONT5	I/O	Common input/output terminal 1~5. Controlled by serial data command from microcomputer.
29	EMPH	O	De-emphasis monitor terminal. "H" when playing de-emphasis disk.
30	C2F	O	C2 fragment output terminal.
31	DOUT	O	Digital OUT output terminal (EIAJ format).
32 & 33	TEST3, TEST4	I/O	Test input terminal. Internal pull-down resistance attached. Connected to 0V terminal.
34	NC	—	Not used.
35	MUTEL	O	L channel 1 bit DAC. Mute output terminal for L channel.
36	LVDD	—	L channel 1 bit DAC. Voltage terminal for L channel.
37	LCHO	O	L channel 1 bit DAC. Output terminal for L channel.
38	LVSS	—	L channel 1 bit DAC. Connected to L channel. Connected to 0V.
39	RVSS	—	R channel 1 bit DAC. Connector terminal for R channel. Connected to 0V.
40	RCHO	O	R channel 1 bit DAC. Output terminal for R channel.
41	RVDD	—	R channel 1 bit DAC. Power terminal for R channel.
42	MUTER	O	R channel 1 bit DAC. Mute output terminal for R channel.
43	XVDD	—	Power supply terminal for crystal oscillator.
44	XOUT	O	Connected to crystal oscillator 16.9344 MHz.
45	XIN	I	
46	XVSS	—	Connected to 0V. Connected to ground for crystal oscillator.
47	SBSY	O	Output synchronization signal of sub code block.
48	EFLG	O	Monitor terminal for C1, C2, single, or double correction.
49	PW	O	Output terminal for sub-codes: P, Q, R, S, T, U, W.

Pin No.	Pin Name	I/O	Description
50	SFSY	O	Output sub-code-frame synchronization signal. Sub code is down when standby.
51	SBCK	I	Input sub-code reading clock. Schumit-trigger input.
52	FSX	O	Output 7.35kHz synchronization signal generated from crystal oscillator.
53	WRQ	O	Output stand-by for sub-code Q output.
54	RWC	I	Read/write control input. Schumit-trigger input.
55	SQOUT	O	Output sub-code Q.
56	COIN	I	Input command from microcomputer.
57	$\overline{\text{CQCK}}$	I	Input clock to adopt command input or to recall sub-codes from SQOUT.
58	$\overline{\text{RES}}$	I	Reset terminal for LC78622. Set to "L" whenever power is on.
59	TST11	O	Test output terminal. Open setting (general setting: "L" output) when used.
60	16M	O	16.9344MHz output terminal.
61	4.2M	O	4.2336MHz output terminal.
62	TEST5	I	Test input terminal. Internal pull-down resistance attached. Connected to 0V.
63	$\overline{\text{CS}}$	I	Chip-select input terminal. Internal pull-down resistance attached.
64	TEST1	I	Test input terminal. No pull-down resistance attached. Connected to 0V.

IC DESCRIPTION

IC, LC 866432V-5D27 <U>

Pin No.	Pin Name	I/O	Description
1	O-CE	O	Connected to TUNNER PLL IC LC72131 Pin 3.
2	O-FS/STB	O	Connected to FRONT SHIFT REGISTER BU2092 Pin 4 (FS-STB).
3	O-M/STB	O	Connected to MAIN SHIFT REGISTER BU4094 Pin 1 (STB) and BH3854 Pin 18 (LATCH).
4	O-DATA	O	Connected to SHIFT REGISTER BU4094 Pin 2, BU2092 Pin 2, BH3854 DATA, and LC72131 Pin 4 (DI).
5	O-CLK	O	Connected to SHIFT REGISTER BU2092 Pin 3, BU4094 Pin 3 (CLK), PLL IC LC72131 Pin 5 (CL) and BH3854 Pin 20 (CK).
6	O-CKSFT/L	O	System micron clock shift output.
7	RESET	-	Micron reset.
8	I-STEREO	I	Detect TUNNER STEREO status.
9	I-TUNE/IFC	I	Connected to TUNNER PLL IC LC72131 Pin 6 (DO).
10	VSS	-	GND.
11, 12	CF1, CF2	-	Connected to 6MHz oscillator terminal.
13	VDD1	-	Micron supply (+5V).
14	I-KEY0	I	Input KEY signal (A/D value).
15	I-KEY	I	Input KEY signal (A/D value).
16	I-ENC1	I	Input ENCODER (MULTI JOG) signal (A/D value).
17	I-ENC2	I	Input ENCODER (VOL) signal (A/D value).
18	I-CDSW	I	Detect CD DOOR status.
19	I-DMSW	I	Detect TAPE DOOR status.
20	I-DSW	I	Detect DECK REC status.
21	I-MS	I	Input DECK music sensor.
22	I-TM/BASE	I	Input reference clock for timer.
23	I-HOLD	I	Power failure detect input.
24	I-RMC	I	System Remote control input.
25~30	T0~T5	O	FL grid output.
31~34	T6~T9	O	FL grid output.
35~40	S10~S15	O	FL grid output.
41	VDD2	-	System supply (+5V).
42	VP	-	Power supply input for FL display.
43~50	S16~S23	I/O	FL tube anode output and INITIAL input.
51~56	S24~S29	I/O	FL tube anode output and INITIAL input.
57~58	PD6, PD7	O	REC-STANDBY : Record standby condition. NO-REC : Record stop. LD-SW : Disc detection.
59	O-CKSFT/M	O	MD system micron clock shift output.
60	O-CD CLOSE	O	Output CD DOOR CLOSE control.
61	O-CD OPEN	O	Output CD DOOR OPEN control.
62	O-TA CLOSE	O	Output TAPE TRAY CLOSE control.

Pin No.	Pin Name	I/O	Description
63	O-TA OPEN	O	Output TAPE TRAY OPEN control.
64	O-KEY/SCAN	O	Detect INITIAL DIODE MATRIX timing.
65	O-POWER	O	Power supply control output.
66	O-MOTOR	O	Output DECK motor-power supply control.
67	O-PL	O	DECK plunger control output.
68	O-FM/STB	O	Connected to SHIFT REGISTOR BU2092 Pin 4 (FM-STB) for MD KEY.
69	I-STOP	I	Input DECK stop pulse.
70	I-AS	I	Input DECK auto pulse.
71	I-LPLAY	I	Input MD PLAY LED.
72	I-LPAUSE	I	Input MD PAUSE LED.
73	VSS2	-	GND.
74	O-COIN	O	Output CD command-data.
75	I-SQOUT	I	Sub-code Q input.
76	O-CQCK	O	Output CD command clock.
77	O-RWC	O	Output CD read / write control.
78	I-WRQ	I	Input standby for CD sub-code Q output.
79	I-DRF	I	Detect CD RF level.
80	O-MUTE	O	Mute output.

IC, LC866448W-5E62 <EZ>

Below indicate the difference of Pin No., Pin Name, Description of IC, LC866432V-5D27 <U> and IC, LC866448W-5E62 <EZ>.

Pin No.	Pin Name	I/O	Description
19	I-SIG	I	Tuner signal strength.
22	I-RD/CLK	I	CLK from RDS IC.
59	I-LPLAY/S32	I	MD PLAY LED input.
60	I-LPAUSE/S33	I	MD PAUSE LED input.
71	I-TM/BASE	I	Input reference clock for timer.
72	I-RD/DATA	I	Data from RDS IC.

IC, BU2092 (FRONT-SYS C.B)

Pin No.	Pin Name	I/O	Description
1	VSS	-	GND.
2	DATA	I	Serial data input.
3	CLK	I	Data is shifted serially through the shift register on the positive transition of the CLOCK.
4	FS-STB	O	FRONT REGISTER Strobe output.
5	TAPE	O	TAPE LED ON/OFF output.
6	TUNNER	O	TUNNER LED ON/OFF output.
7	AUX	O	AUX LED ON/OFF output.
8	CD	O	CD LED ON/OFF output.
9	MD	O	MD LED ON/OFF output.
10	REW	O	REW LED ON/OFF output.
11	PLAY	O	PLAY LED ON/OFF output.
12	FF	O	FF LED ON/OFF output.
13	PAUSE	O	PAUSE LED ON/OFF output.
14	STOP	O	STOP LED ON/OFF output.
15	REC	O	REC LED ON/OFF output.
16	Q11	O	Data output.
17	OE	I	Output enable (output FET "H" level is OFF).
18	VDD	-	Power supply.

IC, BU2092 (FRONT-MD C.B)

Pin No.	Pin Name	I/O	Description
1	VSS	-	GND.
2	DATA	I	Serial data input.
3	CLK	I	Data is shifted serially through the shift register on the positive transition of the CLOCK.
4	FS-STB	I	FRONT REGISTER Strobe output.
5	MD	O	Output "H" at MD function.
6	EJECT	O	Output MD eject open.
7	MD-CONT	O	Key switching output at MD function. MD POWER ON at "L".
8	REW	O	Key switching output at MD function. MD REW at "L".
9	FF	O	Key switching output at MD function. MD FF at "L".
10	REC	O	Key switching output at MD function. MD REC at "L".
11	PAUSE	O	Key switching output at MD function. MD PAUSE at "L".
12	PLAY	O	Key switching output at MD function. MD PLAY at "L".
13	STOP	O	Key switching output at MD function. MD STOP at "L".
14	DIG/ANA	O	MD, REC, DIGITAL/ANALOG switching output. DIGITAL at "H".
15	LED CONT	-	MD function SW control.
16	POWER OK	I	System supply control input.
17	OE	I	Output enable (output FET "H" level is OFF).
18	VDD	-	Power supply.

IC, M38198MC-093FP

Pin No.	Pin Name	I/O	Description
1 , 2	KEY 0, 1	I	Key input 0,1 (AD).
3	LDSW	I	Loading control : LOAD SW input.
4	PBSW	I	Loading control : PB SW input.
5	RECSW	I	Loading control : REC SW input.
6	LOAD	O	Loading control : Motor output 1.
7	EJECT	O	Loading control : Motor output 2.
8	DIG/ANA	I	Digital REC/analog REC switching input.
9	NO-NC	I	Input recording prohibition.
10	SLOW	O	Loading control : Motor speed SLOW output.
11	LLATCH	O	AINAVI : Latch output.
12	LDATE	O	AINAVI : Data output.
13	LCLK	O	AINAVI : Clock output.
14 , 15	ENC-A, B	I	Rotary encoder A,B phase input.
16	RCLK	O	Electronic VR : clock. (Not used)
17	RDT	O	Electronic VR : data. (Not used)
18	REC STANDBY	I	Recording standby OK status input.
19	ARDY	O	MAIN CPU Handshake: Data ready output.
20	ACLK	I	MAIN CPU Handshake: Clock input.
21	SOUT	O	MAIN CPU Handshake: Serial data output (LSB FIRST).
22	SIN	I	MAIN CPU Handshake: Serial Data input (LSB FIRST)
23	SOFT A/B	–	System set micro-P mode when H.
24	SREQ	O	MAIN CPU Handshake: Transmission request output.
25	POWER OK	I	Power supply control with system.
26	NC	–	Connected to GND.
27 , 28	NC	–	Not used.
29	NC	–	Pull up through the resistor.
30	MREQ	I	MAIN CPU Handshake : Recieve signal request input.
31	NC	–	Not used.
32	REMOTE	I	Infrared ray remote control input.
33	TEST	I	Test mode input. Turning on power with “L” starts the TEST MODE.
34	ACOFF	I	AC power failure detection input. Power failure is determined with “L”.
35	RESET	I	Reset input.
36 , 37	NC	–	Not used.
38	OSCI	I	Connected the 7.68 MHz ceramic oscillator.
39	OSCO	O	Connected the 7.68 MHz ceramic oscillator.
40	GND	–	CPU DIGITAL GND.
41	SRST	O	MAIN CPU RESET control output. RESET when “L”.
42	START	O	MAIN CPU HOT START control output. RESTART when “L”.
43	SEG37 (FLSW)	O	FL segment output. (Ever-illuminated Fl segment control output.)
44	MODE	I	MODE input (only during initialization).

Pin No.	Pin Name	I/O	Description
45 ~ 60	GRID 0 ~ 15	O	FL digit output.
61 ~ 90	SEG 35 ~ 6	O	FL digit output.
91	VCC	I	Input 4.2-4.7V.
92 ~ 97	SEG 5 ~ 0	O	FL segment output.
98	VEE	I	Vdd-38V (-33.0V).
99	AVSS	–	CPU ANALOG GND.
100	AVREF	I	Input 4.2-4.7V.

IC, CXA1981Q/AR

Pin No.	Pin Name	I/O	Description
1	VC	O	Voltage output terminal of VCC/2.
2	A	I	Current input terminal of main beam servo signal A.
3	B	I	Current input terminal of main beam servo signal B.
4	C	I	Current input terminal of main beam servo signal C.
5	D	I	Current input terminal of main beam servo signal D.
6	E	I	Current input terminal of main beam servo signal E.
7	F	I	Current input terminal of main beam servo signal F.
8	FI	I	EF balance adjustment terminal.
9	FO	O	EF balance adjustment terminal.
10	PD	I	Quantity of light monitor signal input terminal.
11	APCREF	I	Laser power setup reference voltage output terminal.
12	TEMP1	I	Temperature sensor output terminal.
13	GND	–	Ground terminal.
14	AAPC	O	Output terminal of APC.
15	TST0	O	Test terminal. Set in open. (Not used)
16	TEMPR	O	Temperature sensor-type reference voltage output terminal.
17	TST1	–	Test terminal. Connect to VCC.
18	SWDT	I	Data input terminal of microprocessor's serial interface.
19	SCLK	I	Shiftlock input terminal of microprocessor's serial interface.
20	XLAT	I	Latch input terminal of microprocessor's serial interface. Latch when "L" .
			External clock/crystal oscillator input 1.
21	VREF	O	Reference voltage output terminal. (Not used)
22	TST2	–	Test terminal. Set in open. (Not used)
23	TST3	–	Test terminal. Set in open. (Not used)
24	VCC	–	Power terminal.
25	TST4	–	Test terminal. Connect to VC.
26	TE	O	Tracking error signal output terminal.
27	TLB	–	Tracking error signal low booster-type capacitor connection terminal.
28	CSLED	–	Sled error signal LPF capacitor connection terminal.
29	SE	O	Sled error signal output terminal.
30	ADFM	O	FM signal output terminal of ADIP.
31	ADIN	I	ADIP signal comparator input terminal.
32	ADAGC	–	ADIPAGC capacitor connection terminal.
33	ADFG	O	ADIP binary output terminal.
34	AUX	O	I3 output/ temperature signal output terminal.
35	FE	O	Focus error signal output terminal.
36	FLB	–	Focus error signal low booster-type capacitor connection terminal.
37	ABCD	O	Quantity of light signal output terminal of the main beam servo detector.
38	BOTM	O	Signal output terminal of RF/ABCD's bottom.
39	PEAK	O	Signal output terminal of RF/ABCD's peak.
40	RFAGC	–	RFAGC capacitor connection terminal.

IC, CXP81952-504R

Pin No.	Pin Name	I/O	Description
1 ~ 8	NC	–	Not used.
9	DISCPRO	I	DISC PROTECT SW input.
10	RFLCT	I	DISC REFLECT SW input.
11	B-CAS	O	DRAM self-refresh control output. (Not used)
12	LS	I	PICK UP innermost periphery SW input.
13 , 14	NC	–	Not used.
15	V-FLAG	I	Sub code V plug input while digital IN. (Not used)
16 , 17	NC	–	Not used.
18	ACOFF	I	Power failure detection input. Fixed H.
19	S-REQ	I	Serial interface: Sub interrupt request signal.
20	START	I	Hot start-type input. Fixed H.
21	B-RAS	O	D-RAM self-refresh control. (Not used)
22 , 23	NC	–	Not used.
24	M-REQ	O	Serial interface: MD microprocessor interrupt request signal.
25	DRIVE	O	Recording current control. "L" when recording.
26 ~ 28	NC	–	Not used.
29	DAPON	O	DA converter ON/OFF control. H: ON. (Not used)
30	DMUTE	–	Open drain. (Not used)
31	REC	O	Recording circuit-type power ON/OFF control. H: ON Open drain. (Not used)
32	AMUTE	O	Analog mute. H: MUTE.
33 ~ 36	NC	–	Not used.
37	MP	I	Connected to GND.
38	SRST	I	Receive the system microprocessor's P-CON, the MD microprocessor starts up. (Reset terminal)
39	DGND	–	Connected to GND.
40	XTALO	O	Connect to 12 MHz ceramic oscillator.
41	XTALI	I	
42	ARDY	I	Serial interface : Ready signal.
43	SIN	I	Serial interface : SI signal.
44	SOUT	O	Serial interface : SO signal.
45	ACLK	O	Serial interface : Clock signal.
46	XLAT	O	Serial data strobe output.
47	XRST0	O	RESET signal to CXD 2533BR/CXA1981. Reset when "L".
48	XRST1	O	Reset signal to CXD 2536. Reset when "L".
49	NC	–	Not used.
50	AVSS	–	Connected to GND.
51	AVREF	–	Connected to power.
52	AVDD	–	
53 ~ 56	NC	–	Not used. (PULL UP)
57 ~ 59	NC	–	Not used. (connected to GND)
60	NC	–	Not used. (PULL UP)
61	COUT	I	Track jump count input.
62	SP-FG	I	Spindle FG input.
63	SHCK	I	Shock detection input.
64	FOK	I	FOK input. FOCUS ON with "H".
65	GFS	I	Guard frame sync input. Frame sync is OK when "H" .
66	SENS	I	CXD2535 internal status monitor input.
67	NC	–	Not used. (Connected to GND)
68	CS	I	Serial data strobe input.
69	NC	–	Not used.
70	EXTVCO	O	VCO ON/OFF control. ON with "L". (Not used)
71	P-CONT	O	DSP power control. Drop DSP/RF/MOTOR's power with "L".
72	RFSW	–	Not used.
73 , 74	NC	–	
75	DQSY	I	Digital recording-type Sub Q sync input.
76	XINT	I	Interrupt request input form CXD2536R. Interrupt with "L".
77	SRDT	I	CXD2536R Serial data.
78	SWDT	O	CXD2536R/CXA1981A Serial data.
79	SCLK	O	SRDT/SWDT Serial lock.
80	SQSY	O	EFM Sub code Q sync/ADIP sync.
81 ~ 83	NC	–	Not used.
84	NC	–	Not used. (clock does not support) Connected to GND.
85	NC	–	Not used. (clock does not support)
86	VSS	–	Connected to GND.
87 , 88	VDD	–	Connected to power.
89	SHCKEN	O	Shock detection request output.
90	WRPWR	O	Laser power control to CXD2535BR. Recording power with "H".
91	DIRC	O	Track jump control.
92 , 93	SMD0 , SMD1	O	CXD2536R serial data control mode.
94	RCPB	O	CXD2536R recording/playback control. Recording mode with "H".
95	WRMN	O	ATRAC encode and external RAM write control.
96	TX	O	CXD2536R recording data enable control. Permissible with "H".
97	MOD	O	Laser diode high frequency weight control.
98	OPMUTE	O	Laser diode control. ON with "H".
99	ADPON	O	AC CONVERTOR power control. ON with "H". (Not used)
100	EMPH	O	AC CONVERTOR emphasis control. ON with "L".

IC, CXD2535CR

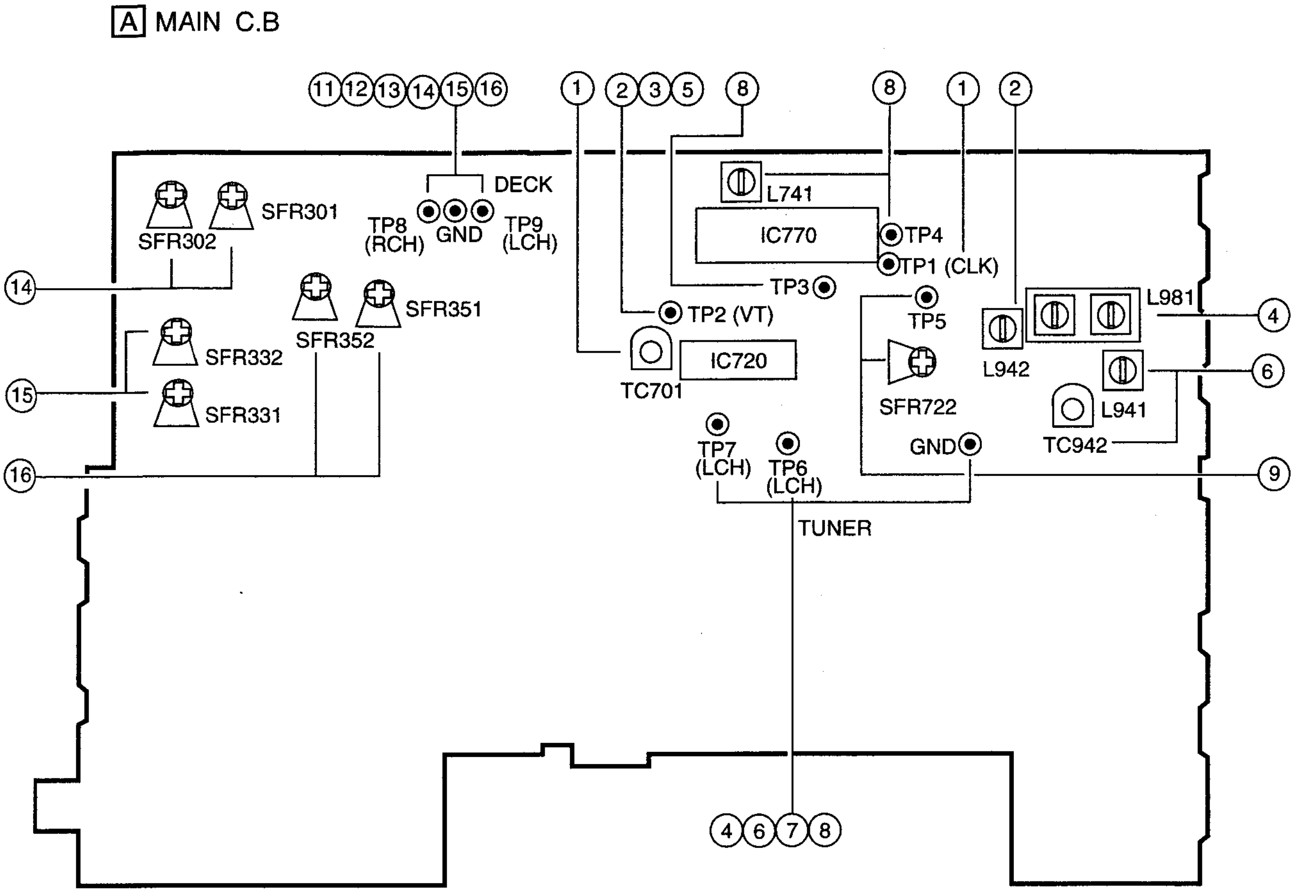
Pin No.	Pin Name	I/O	Description
1	FS256	O	Power terminal.
2	FOK	O	256Fs output (11.2896MHz).
3	DFCT	O	Defect detection output.
4	SHCK	O	Latch input of microprocessor serial interface. Latch with start up.
5	SHCKEN	I	Track jump detection output.
6	WRPWR	I	Laser power switch input. When “H”, recording power. When “L”, playback power.
7	DIRC	I	Track jump control signal.
8	SWDT	I	Data input of microprocessor serial interface.
9	SCLK	I	Shiftlock input of microprocessor serial interface.
10	XLT	I	Latch input of microprocessor serial interface. Latch with start up.
11	SRDT	O	Data output of microprocessor serial interface.
12	SENS	O	Terminal that outputs the internal status in response to the address of microprocessor serial interface.
13	ADSY	O	ADIP sync output. (Not used)
14	SQSY	O	DISC sub code Q sync/ ADIP sync output.
15	DQSY	O	Ubit CD or MD format sub code Q sync output, When the source of digital in is CD or MD.
16	XRST0	I	Reset input. When “L” reset.
17	TEST4	I	Test terminal. Connected to GND.
18	CLVSCK	O	Spindle servo evaluation-type clock output (5.6448MHz). (Not used)
19	TEST5	I	Test terminal. Connected to GND.
20	DOUT	O	Digital Audio interface signal output.
21	DIN	I	Digital Audio interface signal input.
22	FMCK	O	ADIP FM recovery clock output. (Not used)
23	ATER	O	ADIP CRC flag output. When “H”, error. (Not used)
24	REC	I	Recording/Playback’s changeover. When “H”, recording; when “L”, playback.
25	DVSS	–	Digital GND.
26	DOVF	I	Volt input of output signals from the DOUT terminal. Connected to GND.
27	DODT	I	Output signals from the DOUT terminal and peak detection-type audio data input.
28	DIDT	O	Audio data output of signals input from the DIN terminal.
29	DTI	I	Recording data input from the CXD2536A.
30	DTO	O	Playback data output to the CXD2536A, when in playback. When recording, “Z”. (Not used)
31	C2OP	O	Output of playback data C2 pointer, when in playback. When Digital Rec., output of digital in’s volt. When Analog Rec., “L”.
32	BCK	O	64Fs output (2.8224MHz.)
33	LRCK	O	Fs output (44.lkHz).
34	XTAO	O	Crystal oscillating circuit output terminal (XTA terminal’s reverse output). (Not used)
35	XTAI	I	Crystal oscillating circuit input terminal (512Fs=22.5792MHz).
36	MCLK	O	Master clock output (512Fs=22.5792MHz). (Not used)
37	XBCK	O	BCK reverse output. (Not used)
38	DVDD	O	Digital power supply.
39	WDCK	O	2Fs output (88.2KHz). (Not used)
40	REFCK	O	Read Frame Clock output. (Not used)
41	WFCK	O	White Frame Clock output. (Not used)
42	GTOP	O	Frame sync safeguard window activation mode monitor. The frame sync safeguard window is released, when “H”. (Not used)
43	GFS	O	Frame sync is OK, when in “H”.
44	XPLCK	O	EMF decoder PLL clock output (98Fs=4.3218MHz). (Not used)
45	EFMO	O	“L” when playback. EFM (encode data) output, when recording .
46	RAOF	O	RAM overflow output, when playback. (Not used)
47	MVCI	I	Control voltage input of the Digital In PLL-type externally connected VCO.
48	TEST2	I	Test terminal. Connected to GND.
49	DIPD	O	Digital in PLL phase comparison output.
50	DVSS	–	Digital GND.
51	DICV	I	Control voltage input of the Digital In PLL-type internal VCO.
52	DIFI	I	Digital In PLL-type internal VCO usage filter input.
53	DIFO	O	Digital In PLL-type internal VCO usage filter output.
54	AVDD	–	Analog power supply.
55	ASYO	O	Playback EFM full swing output (“L” = VSS, “H” =VDD).
56	ASYI	I	Playback EFM Comparator slice voltage input.
57	BIAS	I	Playback Comparator slice current input.
58	RFI	I	Playback EFM’s RF signal input.
59	AVSS	–	Analog GND.
60	CLTV	I	Internal VCO control voltage input for both master PLL of the playback digital PLL and recording EMF PLL-type.
61	PCO	O	Phase comparison output for both master PLL of the playback digital PLL and recording EMF PLL-type.
62	FILI	I	Filter input for both master PLL of the playback digital PLL and recording EMF PLL-type.
63	FILO	O	Filter output for both master PLL of the playback digital PLL and recording EMF PLL-type.
64	PEAK	I	Peak hold signal input of quantity of light. When “L”, SRAM.
65	BOTM	O	Bottom hold signal input of quantity of light.
66	ABCD	I	Quantity of light signal input.
67	FE	I	Focus error signal input.
68	AUXI	I	Auxiliary input 1.
69	VC	I	Mid-point voltage input.
70	ADIO	O	Monitor output of the A/D converter input signal.
71	TEST3	–	Test terminal. Connected to GND.
72	AVDD	–	Analog GND.
73	ADRT	I	Voltage input of A/D converter activation range upper limit.
74	ADRB	I	Voltage input of A/D converter activation range lower limit.
75	AVSS	–	Analog GND.

Pin No.	Pin Name	I/O	Description
76	SE	I	Sled error signal input.
77	TE	I	Tracking error signal input.
78	AUX2	I	Auxiliary input 2.
79	DCHG	I	Connected to GND.
80	TEST6	I	Test terminal. Connected to GND.
81	TEST1	I	Test terminal. Connected to GND.
82	ADFG	I	ADIP binary signal (22.05 ± 1 kHz) input.
83	TS25	I	Test terminal. Connected to GND.
84	LDDR	O	Laser drive output.
85	TRDR	O	Tracking servo drive output. (–)
86	TFDR	O	Tracking servo drive output. (+)
87	FFDR	O	Focus servo drive output.(+)
88	DVDD	–	Digital power supply.
89	FRDR	O	Focus servo drive output.(–)
90	FS4	O	4Fs output (176.4 kHz).
91	SRDR	O	Sled servo drive output. (–)
92	SFDR	O	Sled servo drive output. (+)
93	SFRD	O	Spindle servo drive output. (–)
94	SPFD	O	Spindle servo drive output. (+)
95	DCLO	O	Sled servo drive evaluation-type serial data output. (Not used)
96	DCLI	I	Spindle servo evaluation-type serial data input.
97	XDCL	O	Spindle servo evaluation-type serial data load signal input. (Not used)
98	OFTRK	O	Off-track signal output. When "H", off-track.(Not used)
99	COUT	O	Track jump number count signal output.
100	DVSS	–	Digital GND.

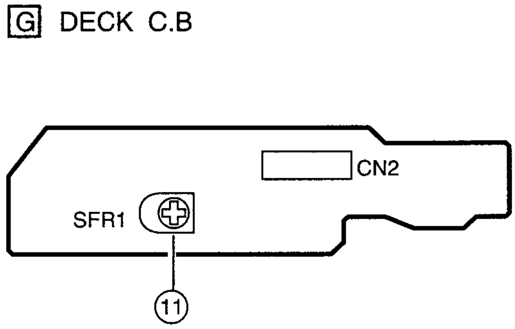
IC, CXD2536CR

Pin No.	Pin Name	I/O	Description
1	VDD	–	Power supply terminal.
2	SWDT	I	Microprocessor serial interface data input.
3	SCLK	I	Microprocessor serial interface shiftlock input.
4	XLAT	I	Microprocessor serial interface latch input. Latch with start up.
5	SRDT	O	Microprocessor serial interface data output.
6	SENS	O	Terminal that outputs the internal status in response to the address of Microprocessor serial interface.
7 , 8	SMDO , SMDI	I/O	Serial command control mode.
9	XINT	O	Interrupt request output terminal. When an interruption status has occurred, "L".
10	RCPB	I	"H" is the recording mode/ "L" is the playback mode.
11	WRMN	I	"H" is the write mode/ "L" is the monitor mode.
12	TX	I	Enable signal input terminal of the recording data output. Enable with "H".
13	VSS	–	Connected to GND.
14 ~ 16	TST0 ~ TST2	I	Test-type terminal. Connected to GND.
17	XRST	I	Input with reset. When "L", reset.
18 ~ 21	TS0 ~ TS3	I	Test-type terminal. Connected to GND.
22 ~ 24	TST3 ~ TST5	I	Test-type terminal. Connected to GND.
25	VSS	–	Connected to GND.
26	AIR CPB	O	ATRAC block recording/playback mode output. When "H", recording mode. When "L", playback mode. (Not used)
27 ~ 35	TST6 ~ TST14	O	Test-type terminal. Open. (Not used)
36 , 37	OSCO , OSCI	I/O	Crystal oscillating circuit output terminal (1024Fs).
38	VSS	–	Connected to GND.
39 , 40	TST15 ~ TST16	O	Test-type terminal. Open. (Not used)
41	DOUT	O	REC monitor output/Decode audio data output.
42	ADIN	I	Analog recording input terminal (Connected external A/D converter output).
43	ABCK	O	XBCK(64Fs) output terminal to the external audio block.
44	ALRCK	O	LRCK(Fs) output terminal to the external audio block.
45 ~ 47	SA2 ~ SA0	O	SRAM address bus. (Not used)
48 , 49	A11 ~ A10	O	SRAM address bus. (Not used)
50	VSS	–	Connected to GND.
51	VDD	O	Power supply terminal.
52 ~ 55	A03 ~ A00	O	RAM address bus.
56 ~ 60	A04 ~ A08	O	RAM address bus.
61	XOE	O	RAM output enable.
62	XCAS	O	DRAM CAS output.
63	VSS	–	Connected to GND.
64	XCS	O	RAM chip select. When "H", DRAM. When "L", SRAM.
65	A09	O	RAM's address bus.
66	XRAS	O	DRAM RAS output.
67	XWE	O	RAM address bus.

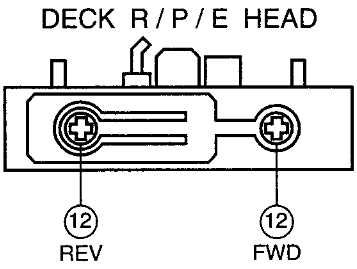
ADJUSTMENT-1 <TUNER / DECK>



A MAIN C.B
⑪⑫⑬⑭⑮⑯
①
②③⑤
⑧
⑧
①
②
DECK
SFR301
SFR302
TP8 (RCH)
GND
TP9 (LCH)
L741
IC770
TP4
TP1 (CLK)
TP3
TP2 (VT)
TP5
L981
L942
L941
TC942
SFR351
SFR352
SFR332
SFR331
IC720
TC701
SFR722
TP7 (LCH)
TP6 (LCH)
GND
TUNER
⑭
⑮
⑯
④
⑥
⑨
④⑥⑦⑧



G DECK C.B
CN2
SFR1
⑪



DECK R / P / E HEAD
⑫
REV
⑫
FWD

< TUNER SECTION >

1. Clock Frequency Adjustment
   Settings : • Test point : TP1
   • Adjustment location : TC701
   Method : Set to AM 1602kHz<EZ>, AM 1710kHz<U> and adjust TC701 so that the test point becomes 2052kHz ± 0.01kHz<EZ>, 2160kHz ± 0.01kHz<U>.

2. LW VT Adjustment <EZ>
   Settings : • Test point : TP2 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3 ± 0.05V.

3. AM (MW) VT Check
   Settings : • Test point : TP2 (VT)
   Method : Set to AM 1602kHz<EZ>, AM 1710kHz<U> and check that the test point is less than 7.5V<EZ>, less than 8.0V<U>.

4. AM (MW) Tracking Adjustment
   Settings : • Test point : TP6, TP7
   • Adjustment location :
   L981..999kHz
   Method : Set to MW 999kHz<EZ>, MW 1000kHz<U> and adjust L981 so that the test point becomes maximum.

5. FM VT Check
   Settings : • Test point : TP2 (VT)
   Method : Set to FM 87.5MHz and check that the test point is more than 1.5V<EZ>, more than 1.0V<U>, then set to FM 108.0MHz and check that test point is less than 8.2V<EZ>, less than 8.0V<U>.

6. LW Tracking Adjustment <EZ>
Settings : • Test point : TP6, TP7
• Adjustment location :
L941 .... 144kHz
TC942 .... 290kHz
Method : Set up TC942 to center before adjustment. The level at 144kHz is adjust to maximum by L941. Then the level at 290kHz is adjust to maximum by TC942.

7. FM Tracking Check
Settings : • Test point : TP6, TP7
Method : Set to FM 98.0MHz and check that the test point is 6dB ± 6dB<EZ>, 2dB ± 6dB<U>.

8. DC Balance / Mono Distortion Adjustment
Settings : • Test point : TP3, TP4 (DC balance)
TP6, TP7 (Distortion)
• Adjustment location : L741
• Input level : 54dB
Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.8%.

9. Auto Stop Level Adjustment
Settings : • Test point : TP5
• Adjustment location : SFR722
• Input level : 20dB
Method : Set to FM 98.0 MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) by 2dB down.

10. Auto Stop Level Check

MW
Settings • Input level : Variable
Method : Check auto stop at MW 999 kHz<EZ>, MW 1000kHz<U> the level is 55dB +10/-15 dB.

FM
Settings • Input level : Variable
Method : Check auto stop at FM 98.0 MHz and the level is 20dB ± 5dB.

< DECK SECTION >

11. Tape Speed Adjustment
Settings : • Test tape : TTA-100
• Test point : TP8, TP9
• Adjustment location : SFR1
Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz±30Hz at FWD play and 3000Hz±45Hz at REV play.

12. Head Azimuth Adjustment
Settings : • Test tape : TTA-300
• Test point : TP8, TP9
• Adjustment location : Head azimuth adjustment screw
Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV PLAY mode.

13. PB Frequency Response Check
Settings : • Test tape : TTA-300
• Test point : TP8, TP9
Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is ± 2dB.

14. PB Sensitivity Adjustment
Settings : • Test tape : TTA-200
• Test point : TP8, TP9
• Adjustment location : SFR301 (Lch)
SFR302 (Rch)
Method : Play back the test tape and adjust SFRs so that the output level of the test point become 300mV ± 10mV.

15 REC/PB Frequency Response Adjustment
Settings : • Test tape : TTA-602
• Test point : TP8, TP9
• Input signal : 1kHz / 10kHz (LINE IN)
• Adjustment location : SFR331 (Lch)
SFR332 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 21mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

16. REC/PB Sensitivity Adjustment
Settings : • Test tape : TTA-602
• Test point : TP8, TP9
• Input signal : 1kHz (LINE IN)
• Adjustment location : SFR351 (Lch)
SFR352 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 21mV. Record and play back the 1kHz and adjust SFRs so that the output is 21mV ± 0.5dB.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity : (THD 3%)	3dB ± 6dB [at 87.5 / 98.0MHz (U)] 6dB ± 6dB [at 108.0MHz (U)] 8dB +6/-10dB [at 87.5 / 98.0MHz (EZ)] 10 +6/-10dB [at 108.0MHz (EZ)]
Signal to noise ratio :	(MONO) More than 65dB [at 98.0MHz (U)] (STEREO) More than 64dB [at 98.0MHz (U)] (MONO) More than 60dB [at 98.0MHz (EZ)] (STEREO) More than 57dB [at 98.0MHz (EZ)]
Distortion :	(MONO) Less than 2.0% [at 98.0MHz] (STEREO) Less than 2.0% [at 98.0MHz]
Auto stop level :	20dB ± 10dB [at 98.0MHz (U)] 30dB ± 8dB [at 98.0MHz (EZ)]
Stereo separation :	More than 25dB [at 98.0MHz (U)] More than 20dB [at 98.0MHz (EZ)]
Intermediate frequency :	10.7MHz

<AM(MW) SECTION>

Sensitivity : (S/N 20dB)	52 ~ 62dB [at 600kHz(U)] [at 603kHz(EZ)] 48 ~ 58dB [at 1000 / 1400kHz(U)] [at 999 / 1395kHz(EZ)]
Signal to noise ratio :	More than 36dB [at 1000kHz(U)] [at 999kHz(EZ)]
Distortion :	Less than 1.5% [at 1000kHz(U)] [at 999kHz(EZ)]
Auto stop level :	55dB +10/-15dB [at 1000kHz(U)] [at 999kHz(EZ)]
Intermediate frequency :	450kHz

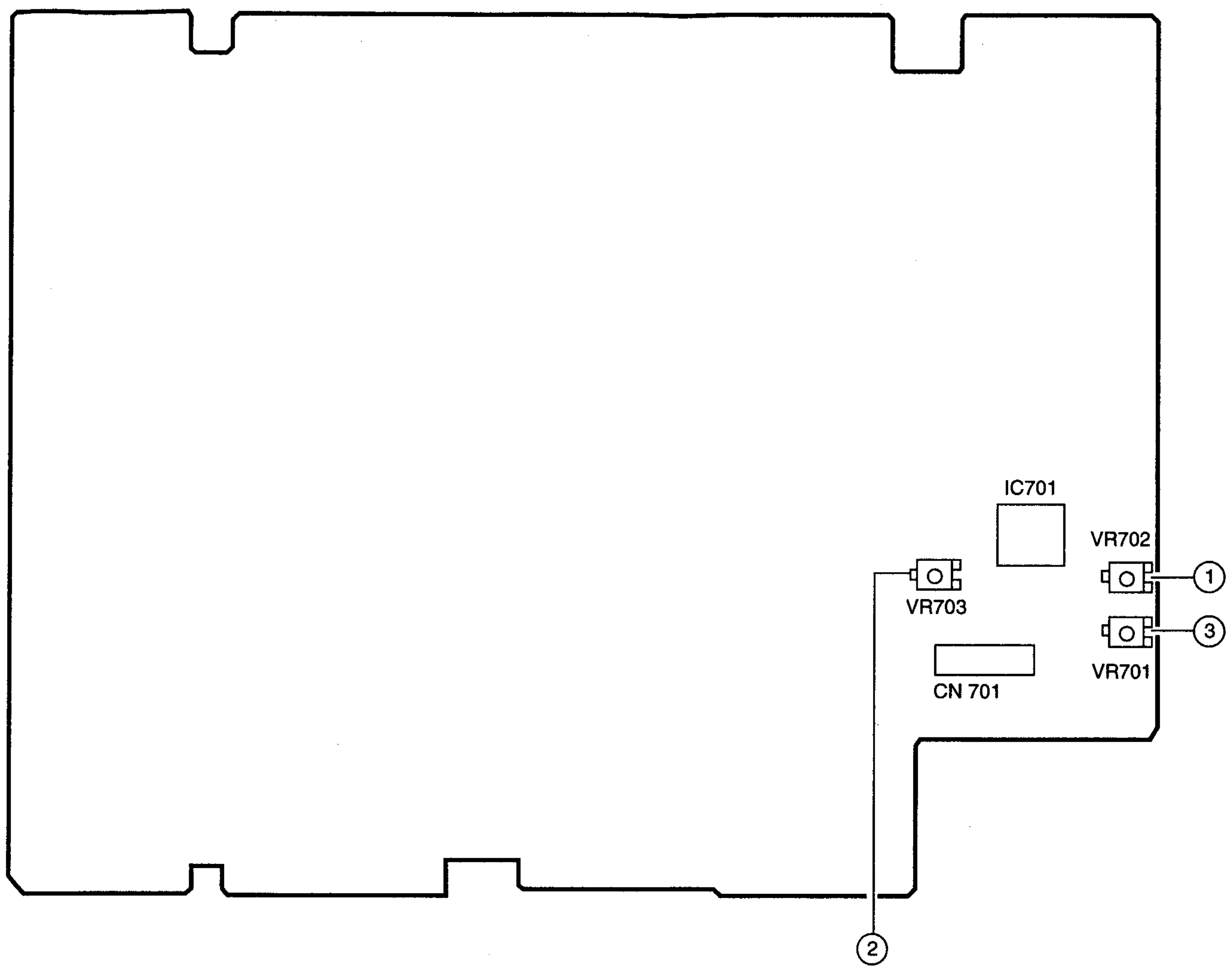
<LW SECTION (EZ)>

Sensitivity : (S/N 20dB)	64dB ± 5dB [at 144kHz] 62dB ± 5dB [at 198kHz] 60dB ± 5dB [at 290kHz]
Signal to noise ratio :	More than 36dB [at 198kHz]
Distortion :	Less than 1.4% [at 198kHz]
Auto stop level :	61dB +10/-15dB [at 198kHz]
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.15% (after 15 mins PLAY) (WRMS)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F & REW torque :	75 ~ 160g-cm
Back tension :	-1 ~ 7g-cm (FWD, REV)
PB output level :	1.5V ± 2dB (SP OUT 2V)
REC/PB output level :	2.0V ± 2dB (SP OUT 2V)
Distortion (REC/PB) :	Less than 2.0% (NORM,CrO$_2$)
Noise level (PB) :	Less than 60/50 mV (NORM,CrO$_2$,DOLBY OFF/B–ON)
Noise level (REC/PB) :	Less than 60/50 mV (NORM,CrO$_2$,DOLBY OFF/B–ON)
Erasing ratio :	More than 60 dB (at 125Hz, 10VU, CrO$_2$)
Test tape :	TTA–602 (NORMAL) TTA–615 (CrO$_2$)

F MD MAIN C.B



Make sure that all adjustment and checking are performed in the test mode.

1. Temperature Compensation Adjustment

Test point : Check with the FL display
Adjustment point : VR702
Jig : Thermometer
In the SERVO OFF mode, rotate JOG and perform adjustments so that the numerical values of the FL display match the temperature displayed on the switch-over thermometer on the TEMP$ ** display. (Place the thermometer near the set, and measure the room temperature.)

Thermometer	FL display
–7°C ~ 2°C	$ B7 ~ $ C9
–2°C ~ 3°C	$ BF ~ $ 01
3°C ~ 8°C	$ C7 ~ $ D9
8°C ~ 13°C	$ CF ~ $ E1
13°C ~ 18°C	$ D7 ~ $ E9
18°C ~ 23°C	$ DF ~ $ F1
23°C ~ 28°C	$ E7 ~ $ D9
28°C ~ 33°C	$ EF ~ $ 01
33°C ~ 37°C	$ F7 ~ $ 09

[The FL display is displayed in units of 16.]

Caution : Since this adjustment influences recording, do not perform it when room temperature measurements are not possible.

2. Laser Power Adjustments

Test point : Laser output of pick-up.
Adjustment point : VR703
Measuring instrument: Laser power meter.
Method : In the SERVO OFF mode, press the EDIT key 4 times, and confirm that the FL has changed to the LASER WR display. Make adjustments with the Laser power meter so that the output is 6.8 ± 0.15mW.
Caution : Be careful when making adjustments as there is a possibility of damage to the pick-up when output exceeds 7.0mW.

3. EF Balance Adjustment

Test point : Check with the FL display
Adjustment point : VR 701
Test disk : MO disk (recording/playback disk)
Method : ① In the ALL SV OFF mode, press the PAUSE key and changing to SELECT GRV.

② Slightly move the pick-up from the innermost periphery to the outer periphery.

③ Press the PLAY key, and after changing to FOCUS ON, press the EDIT key. (LASER WR is on the display)

④ Rotate JOG, and adjust VR701 so that the display changes SE$80 to the center.

Note : The range of the moving numbers is SE$71-$8E.

4. Checking of FOCUS, TRACKING and SLED GAIN

Test disk : TGYS-1 (playback-type)
Method : ① In the ALL SV OFF mode, press the PAUSE key and changing to SELECT PIT.

② Rotate JOG 3 times after pressing the operation buttons in the order of [PLAY] → [ENTER] → [STOP], check that the FL display is in the range that follows next.

<FL display>

Gf ① t ② S ③

① FOCUS GAIN : Display 28-5C
② TRACKING GAIN : Display 13-38
③ SLED GAIN : Display 13-38

* The items following are not regularly used in adjustments and checking.

5. Error Rate

1) Recording/Playback Error Rate

Test disk : MO disk (for recording/playback)
Test point : Checking with FL display

– Recording –

① In the ALL SV OFF mode, press the PAUSE key and change to SELECT GRV.
② Slightly move the pick-up from the innermost periphery toward the outer periphery.
③ Press the DISPLAY key and lower the OWH.
④ Begin recording by pressing the buttons in the following order [REC] → [PLAY] → [ENTER] → [REC]. At this time, check the disk address (recording start position) appearing in the lower left of the display. (Usually starts from approximately 600 clusters.)
⑤ After recording for approximately 15 seconds, stop recording by pressing the STOP key.
⑥ Press the FUNCTION key and raise the OWH.

– Error rate checking –

⑦ Press the buttons in the order of [PLAY] → [ENTER] and change to ALL SV ON.
⑧ When the address indication on the lower left of the display is in the recording start position, rotate JOG and change to the error rate.
⑨ Check that the numerical values in the recorded area are the same as they appear below.
Cl : At or less than 0030
Err : 0000 (zero)
Note: Correct numerical values will not be displayed when error rates outside of the recording range are displayed.

2) Playback Error Rate

(1) PIT disk (for playback)
Test disk : TGYS-1 (for playback)
① In the ALL SV OFF mode, press the PAUSE key and change to SELECT PIT.
② Press the buttons in the order of [PLAY] → [ENTER] and change to ALL SV ON.
③ Rotate JOG, display the error rate and check that the error is the same as the numerical values that appear below.
Cl : At or below 0050
Err : 0000 (zero)

(2) MO PIT area (PIT area inside the MO disk)
Test disk : MO disk (for recording/playback)
① In the ALL SV OFF mode, press the PAUSE key and change to SELECT PIT.
② Move the pick-up to the innermost periphery.
③ Press the buttons in the order of [PLAY] → [ENTER] and change to ALL SV ON.
④ Rotate JOG, display the error rate and check that the error is the same as the numerical values that appear below.
Cl : At or below 0060
Err : 0000 (zero)

Pin No.	Pin Name	I/O	Description
68, 69, 70, 71	D1, D0, D2, D3	I/O	RAM data bus.
72 ~ 74	D4 ~ D6	I/O	RAM data bus. (Not used)
75	VSS	–	Connected to GND.
76	D7	I/O	RAM data bus. (Not used)
77	ERR	I/O	Data input terminal to the C2PO exclusive use RAM. (Not used)
78	EXTC2R	I	Selection of C2PO exclusive use RAM. When using, "H". When not in use, "L".
79	BUSY	O	Busy output of RAM access. When "H", RAM access. (Not used)
80	EMP	O	Output of signal indicating ATRAC data state just prior to empty or full. (Not used)
81	FUL	O	Output of signal indicating ATRAC data state just prior to empty or full. (Not used)
82	EQL	O	ATRAC data empty (when ASC-DSC, "H"). (Not used)
83	MDLK	O	Indicates Recording/Playback data Main/Sub. When "H", sub or linking. When "L", main. (Not used)
84	CPSY	O	Internal sync output. (Not used)
85 , 86	CTMD1 , CTMD0	O	Internal counter mode output. (Not used)
87	SPO	O	512 Fs output.
88	VSS	–	Connected to GND.
89	MDSY	O	Main data sync detection output. (Not used)
90	LRCK	I	LRSK (Fs) from the EFM encoder/decoder input terminal.
91	BCK	I	BCK (64Fs) from the EFM encoder/decoder input terminal.
92	C2PO	I	C2PO from the EFM encoder/decoder input terminal.
93	DATA	I/O	Data from the EFM encoder/decoder input/output terminal.
94	DIDT	I	Digital recording input terminal.
95	DODT	O	REC monitor output/Decode audio data output.
96	DIRCPB	O	Recording to the EMF encoder/Playback mode output. When "H", recording mode. When "L", playback mode.
97	MIN	I	External monitor signal input terminal. Input desired monitor signal.
98	TST17	I	Test-type terminal. Connected to VDD.
99	TST18	O	Test-type terminal. Open. (Not used)
100	VSS	–	Connected to GND.

(3) Recording area of the MO disk

* It is possible to check the error rate of a Recording/Playback disk that has previously been recorded. With this, it is possible to create a standard for judging the quality of a disk in the recording mode.

Test disk : Recording-completed MO disk

① In the ALL SV OFF mode, press the PAUSE key and change to SELECT GRV.

② Slightly move the pick-up from the innermost periphery toward the outer periphery.

③ Press the buttons in the order of [PLAY] → [ENTER] and change to ALL SV ON.

④ Rotate JOG, display the error rate and check that the error is the same as the numerical values that appear below.

Cl : At or below 0060 (standard value)
Err : No need to check

Note : ⓐ The recording start area of the MO disk is the address of 32nd cluster or later. Correct numerical values will not be displayed for the error rates of address displays previous to 32 clusters.

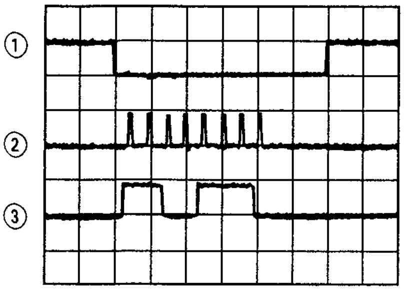
ⓑ When performing measurements on a Pre-recorded disk in the test mode, due to reasons related to data-processing the numerical values in the error display will, without fail, go up. This is not abnormal. In this mode is only checking of the Cl point error rate.

WAVEFORM

[LED Display]

① IC901 Pin ⑪ (LLATCH)
② IC901 Pin ⑬ (LCLK)
③ IC901 Pin ⑫ (LDATA)

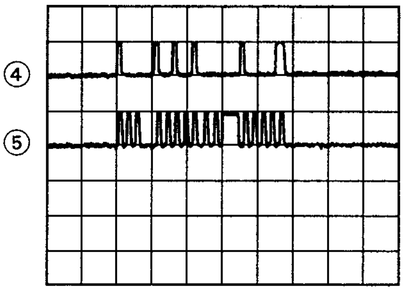
VOLT/DIV : 5 V
TIME/DIV : 20 μ S



[REC VR Data transfer]

④ IC901 Pin ⑰ (RDT)
⑤ IC901 Pin ⑯ (RCLK)

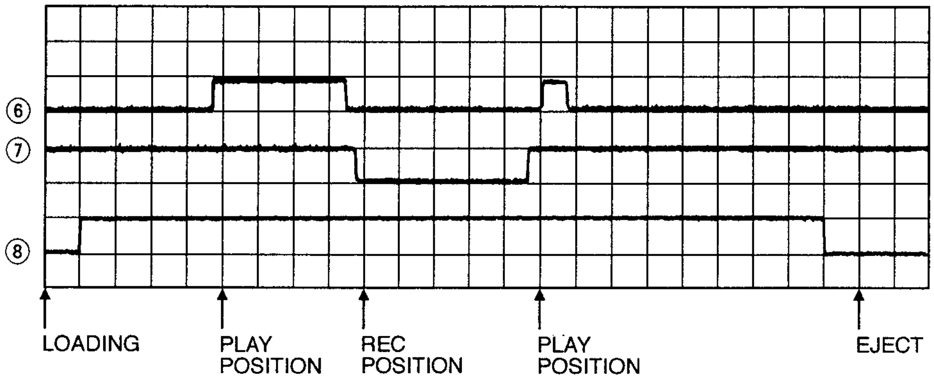
VOLT/DIV : 5V
TIME/DIV : 100 μ s



[Loading SW]

⑥ IC901 Pin ④ (PB SW)
⑦ IC901 Pin ⑤ (REC SW)
⑧ IC901 Pin ③ (LD SW)

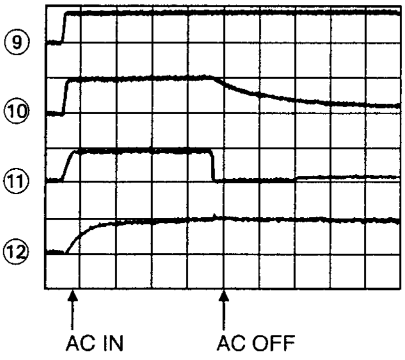
VOLT/DIV : 5V
TIME/DIV : 200 mS



[Put AC from ZERO CHARGE]

⑨ IC901 Pin (91) (VCC)
⑩ IC901 Pin (100) (AVREF)
⑪ IC901 Pin ㉞ (AC OFF)
⑫ IC901 Pin ㉟ (RESET)

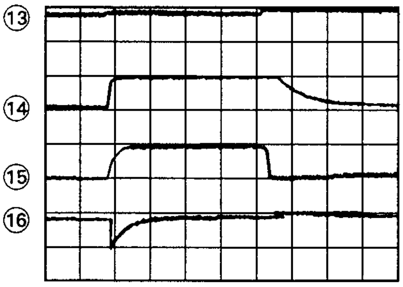
VOLT/DIV : 5V
IIME/DIV : 500mS



[Put AC at BACK UP Timer]

⑬ IC901 Pin (91) (VCC)
⑭ IC901 Pin (100) (AVREF)
⑮ IC901 Pin ㉞ (AC OFF)
⑯ IC901 Pin ㉟ (RESET)

VOLT/DIV : 5V
TIME/DIV : 500mS



TEST MODE – 1 <MD>

1. How to Activate/Cancel the Test Mode and notices when testing.

(1) How to Activate Test Mode

With the MD section, there are two methods possible for start up in the test mode.
Method 1 : Short the Test Land by soldering. (refer to Fig. 2)
Method 2 : Perform the operations as follows;

1) Change the set to the Power off (STANDBY) mode. Make sure that the loading mechanism is in the EJECT mode at this time. (Do not activate the test mode with the disk inserted, because the mechanism will change to the EJECT procedure and impossible to start up the test mode.
2) While pressing the Power button, press the STOP button. (press both buttons simultaneously)

After that, press the following buttons in the order of (Display → EJECT → Display → EJECT). When the test mode has been started up, the display (FL) will be fully illuminated. After this occurs, [Welcome to Minidisc TEST MODE] will be displayed.

(2) How to cancel Test Mode

1) Situation when Test Land has been shorted: Disconnect the AC plug and remove solder from the Test Land.
2) Situation when activate has been performed with buttons : Press the Power SW button and turn off the power. Or, disconnect the AC plug.

The test mode can also be canceled by pressing the EJECT button, when performing a reliability test on the TEST MODE communication mode.

(3) Notices when testing

1) Mechanical abnormalities are disregarded within the TEST MODE. For this reason, when an abnormality in action appears to occur, immediately disconnect the AC plug.
2) Playback and record are not possible within the TEST MODE.

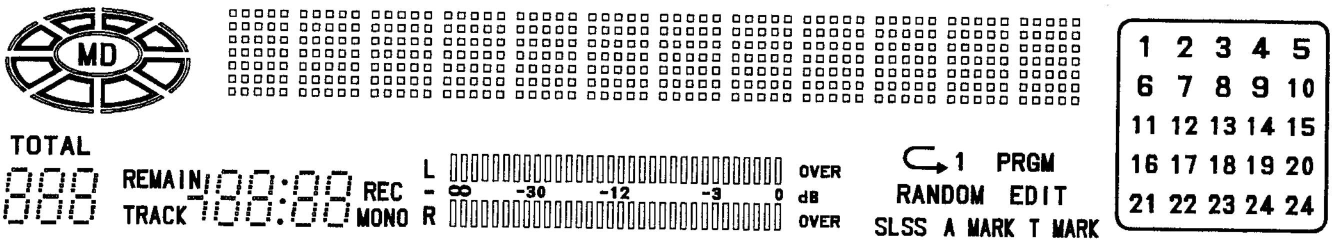


Fig. 1. FL fully illuminated

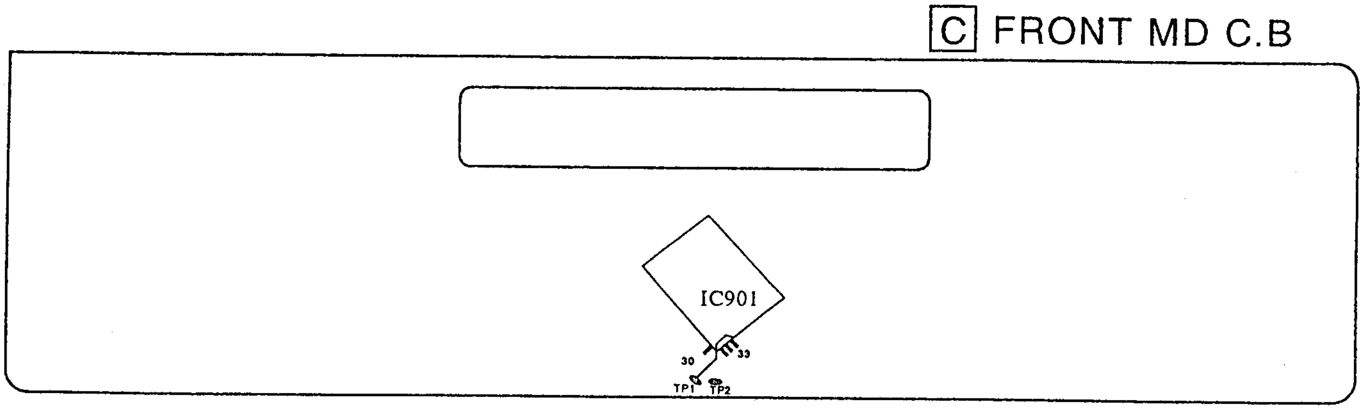


Fig. 2. Position of Test Land

2. Verification during activate of TEST MODE

(1) Display

The FL display is fully illuminated.

(2) Verification of playback related audio circuits is possible.

- Verifiable circuits .... DAC, LINE AMP, HP AMP, DIGITAL OUTPUT, LINE OUTPUT, HP OUTPUT
- Output Level .... 1kHz, -12dB (LINE OUTPUT)

3. Changeover to SERVO standby mode

In order to activate each servo test mode, press the EJECT button and changing to the SERVO standby mode (ALL SV OFF) after starting up the test mode (full-illumination). Note : It is not possible to directly activate the SERVO from the full-illumination mode.

4. Checking of each switch status

Checking of set or mechanism switch status, ON/OFF (switch contact) is possible with the FL display. FL indicate the status of switch ON/OFF by litting on or off each display frame. (Only frames are lit on or off. Words are lit all the time).

SW NAME	SW CONDITIONS	FL DISPLAY		DISK
		SW ON	SW OFF	
REC PROTECT	The accidental-erasure prevention hole is closed (REC possible)	EDIT	———	Recording-type disk
REFLECT	The high reflection DISK (CD), ON	RANDOM	———	Playback-type disk
INNER	The pick up is in the innermost periphery (LIMIT SW is ON)	PRGM	———	———————

* It is possible to indicate LOADING, UNLOADING and OWH's UP, DOWN status with the three display SLSS, AUTOMARK and TIMEMARK.

	MECHANISM CONDITIONS	FL DISPLAY
1)	In the LOADING status (OWH UP mode) The three SLSS, AUTOMARK, AND TIMEMARK are illuminated.	SLSS AUTOMARK TIMEMARK
2)	In the UNLOADING status Only TIMEMARK are illuminated.	TIMEMARK
3)	In the OWH DOWN status Only the SLSS are illuminated.	SLSS

5. Checking SLED Operation

It is possible to check the transfer operations of the SLED MOTOR and the Pick up with the ⏭ (toward the outer periphery) and ⏮ (toward the inner periphery) keys. "T.SLED FWD" will be displayed on the FL display when during transfer to the outer periphery, and "T.SLED RVS" when during transfer to the inner periphery.

6. Checking Laser output

It is possible to change the output of Laser Power with every pressing of the EDIT key in the STOP mode. It is possible to perform repeated operations for laser output through the sequence of CD-R → MO-R → 1/2 LASER → MO-W → OFF and also possible to perform mode check with the FL display and the Lch side level meters.

MODE	DISPLAY
CD-R	LASER CD
MO-R	LASER MO
1/2 LASER	LASER 1/2
MO-W	LASER WR
OFF	LASER OFF

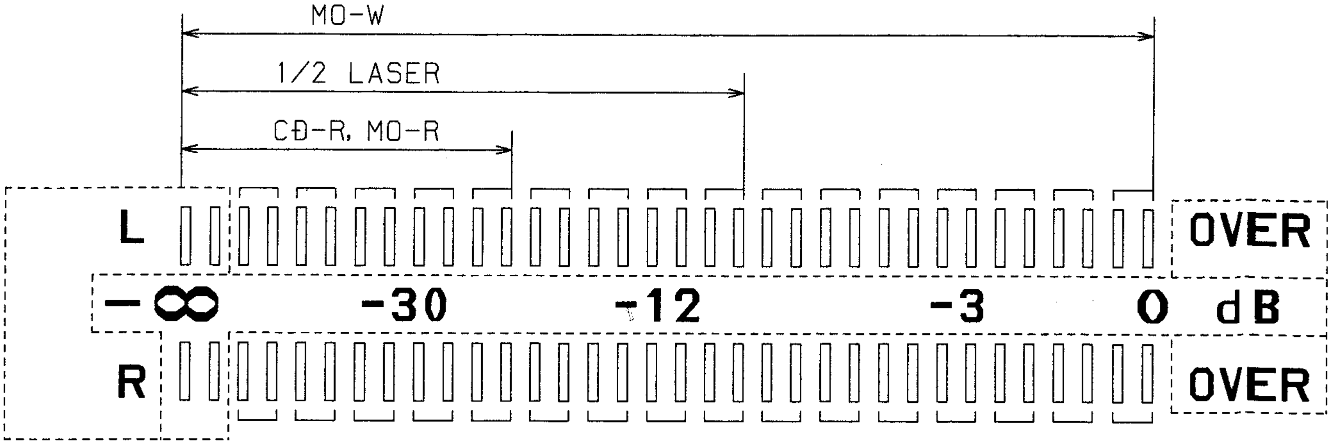

MO-W
1/2 LASER
CD-R, MO-R
L
R
OVER
OVER
-∞
-30
-12
-3
0 dB

Fig. 3. FL level meter (The level meter display shows modes, it does not display the quantity of light generated.)

7. Checking of the activation of the Loading mechanism

It is possible to check the activation of the Loading mechanism with the DISPLAY or FUNCTION keys.

- * DISPLAY DEY .... LOADING
- * FUNCTION KEY .... UNLOADING (EJECT)

For this mode, limited to the time when performing UNLOADING, it is possible to stop the mechanism in the optional position. (When in LOADING, if the DISPLAY key is held down, the mechanism will automatically be moved to the LOADING-completed position.)

8. OWH (OVERWRITE HEAD)

Checking of the activation of the OWH is possible by pressing the DISPLAY, FUNCTION keys with the LOADING MECHANISM in the LOADING MODE.

- * DISPLAY DEY .... OWH is DOWN
- * FUNCTION KEY .... OWH is UP

9. Checking SERVO activation

(1) FOCUS SEARCH and SPINDLE KICK

With no disk inserted and by pressing the PLAY key, it is possible to check the activation of the FOCUS SEARCH and the SPINDLE KICK. This mode with repeat until the STOP key is pressed. (When the LOADING MECHANISM is changed to the LOADING mode, activation can be checked by direct observation.)

(2) FOCUS SERVO

1) Insert the disk.
2) Press the PAUSE key and make selections adjusted to the disk inserted with the SERVO mode.
- * Magneto-optical disk (MO disk) .... SELECT GRV
- * Aluminum disk (CD software) .... SELECT PIT

3) Press the PLAY key and turn on Focus.

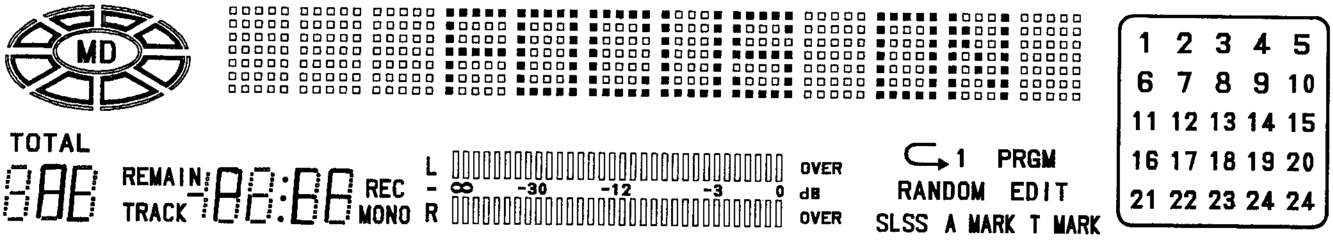

MD
TOTAL
REMAIN
TRACK
REC
MONO
L
R
OVER
-∞ -30 -12 -3 0 dB
OVER
1
PRGM
RANDOM
EDIT
SLSS
A MARK
T MARK
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
21 22 23 24 24

Fig. 4. AL (Aluminum (CD) disk)

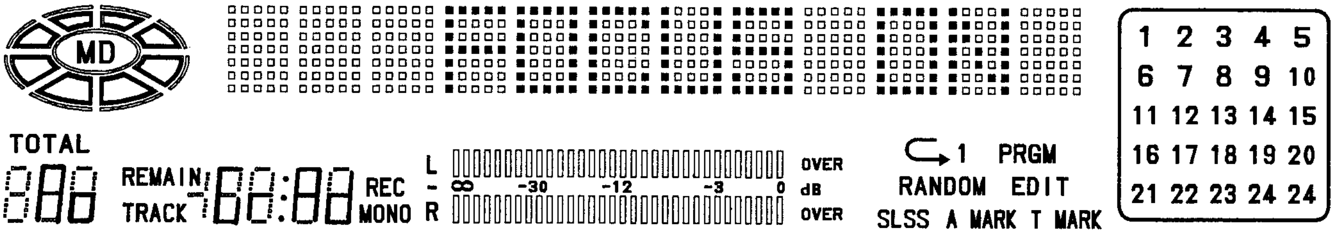

MD
TOTAL
REMAIN
TRACK
REC
MONO
L
R
OVER
-∞ -30 -12 -3 0 dB
OVER
1
PRGM
RANDOM
EDIT
SLSS
A MARK
T MARK
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
21 22 23 24 24

Fig. 5. MO (Recording/Playback disk)

(3) ALL SERVO ON

When the ENTER key is pressed after turning on the FOCUS SERVO, the TRACKING and SLED SERVO turn on and all SERVOs are activated. At this time, on the FL "ALL SV ON" will be displayed in the lower left disk address.

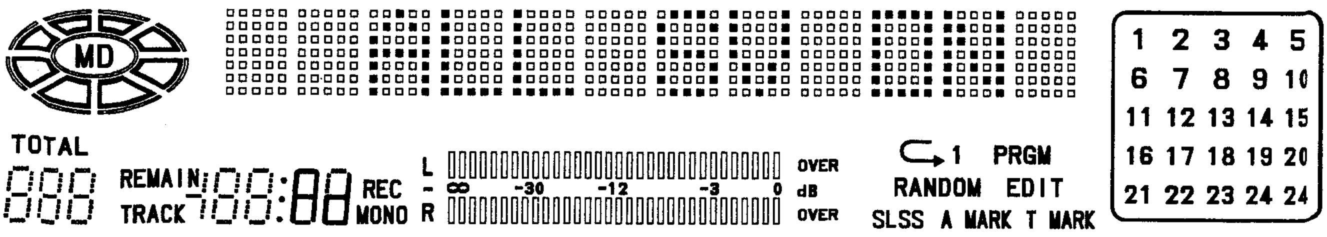

MD
TOTAL
REMAIN
TRACK
REC
MONO
L
R
- ∞ -30 -12 -3 0
OVER
dB
OVER
1 PRGM
RANDOM EDIT
SLSS A MARK T MARK
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
21 22 23 24 24

Fig. 6. MO (Recording/Playback disk)

10. Communications reliability test

The communications reliability test mode is activated by pressing the EJECT button from the SERVO MODE. In this mode, the communications test is performed the front board's CPU and the MD board's CPU, and checking of the data bus line between the CPUs is performed. In the center of the FL, the number of communications test are displayed (displayed with TIMES), and the number of Errors is displayed in the lower left (Err OO). If up until 1000 TIMES, Error count is zero, or E3, E4 do not appear, it can be determined that communication between the CPUs is operating normally.

Test mode will be canceled when the EJECT button is pressed after running the communications reliability test.

TEST MODE - 2 <CD>

1. How to Activate CD Test Mode
1) Insert the AC plug while pressing the function CD button.
2) All FL display tubes will light up, and initialization will be started. (Initialize time: approx. 80 seconds)

2. How to cancel CD Test Mode
Either one of the following operations will cancel the CD test mode.
- Press the function button.
- Press the power switch button.
- Disconnect the AC plug.

3. CD Test Mode Functions
When test mode is activated, the following mode functions from No. 1 to No. 5 can be used by pressing the operation keys.

Mode / No.	Operation	FL display	Operation	Contents
Start mode No.1	Test mode activation	All FL light up	(CD block power supply ON)	Displays the machine mode that it is a test mode. All FL displays light up
Search mode No. 2	■ key	C0--	• Laser diode illuminated under normal circumstances • Continual focus search * NOTE 1 (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes.	• Laser current measurement (Across R4 82ohms resistor) FOCUS SERVO • Check focus search waveform (FSC terminal) • Check focus error waveform (FE terminal)
Play mode No. 3	▶ key	C01	• Normal playback • Focus search is continued if TOC cannot be read * NOTE 1	FOCUS SERVO / TRACKING SERVO CLV SERVO / SLED SERVO (DEF terminal)
Traverse mode No. 4	❚❚ key	C01	• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON / OFF Tracking balance (traverse) check check Tracking error waveform (TES1 terminal)
Sled mode No. 5	⏮ key ⏭	All FL light up	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

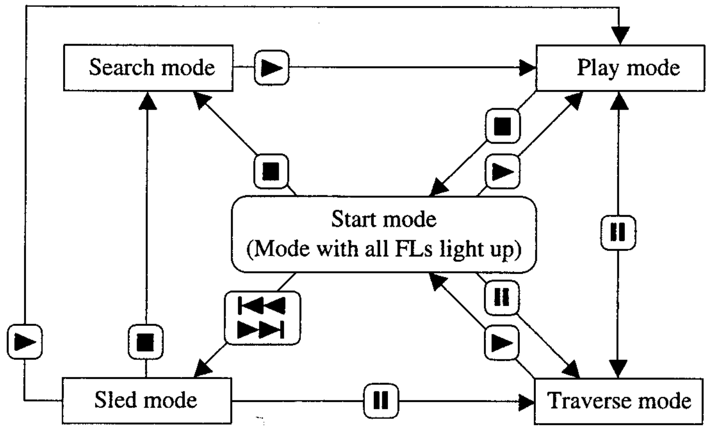
* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases, the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.

* NOTE 2: Do not press the ⏮ or ⏭ keys when the machine is in the ❚❚ status is active. If they are pressed, playback will not be possible after the ❚❚ status has been canceled. If the ⏮ or ⏭ keys are pressed in the ❚❚ status, press the ■ key and return to start mode (No. 1).

* NOTE 3: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

* NOTE 4: Press the eject key if the CD changer mechanism is jammed while initializing.

4. Operation Outline
The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



Search mode
▶
Play mode
■
■
▶
Start mode
(Mode with all FLs light up)
❚❚
⏮
⏭
❚❚
▶
▶
■
Sled mode
❚❚
Traverse mode

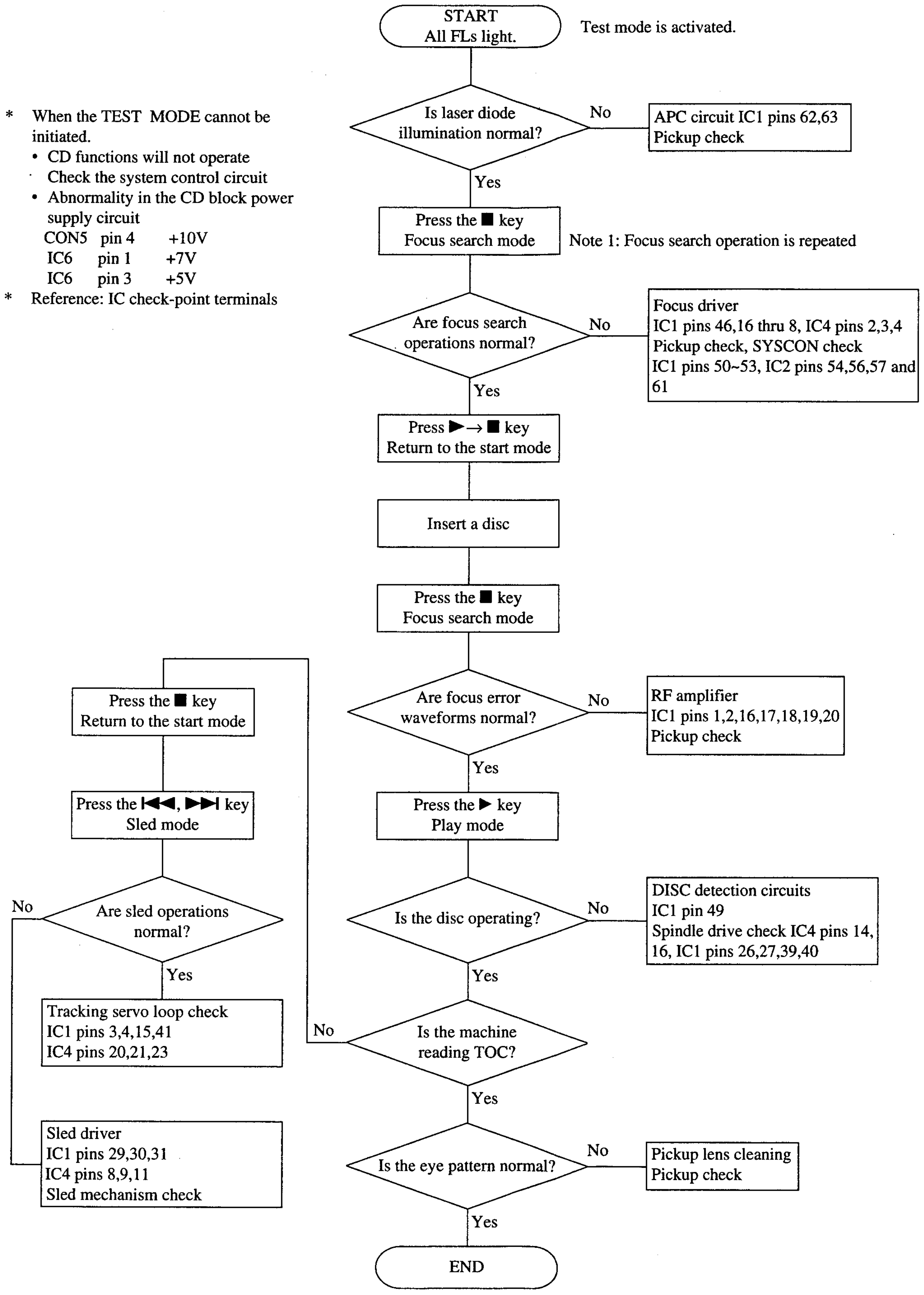
CD TROUBLE-SHOOTING

Flow Chart

* When the TEST MODE cannot be initiated.
- CD functions will not operate
- Check the system control circuit
- Abnormality in the CD block power supply circuit

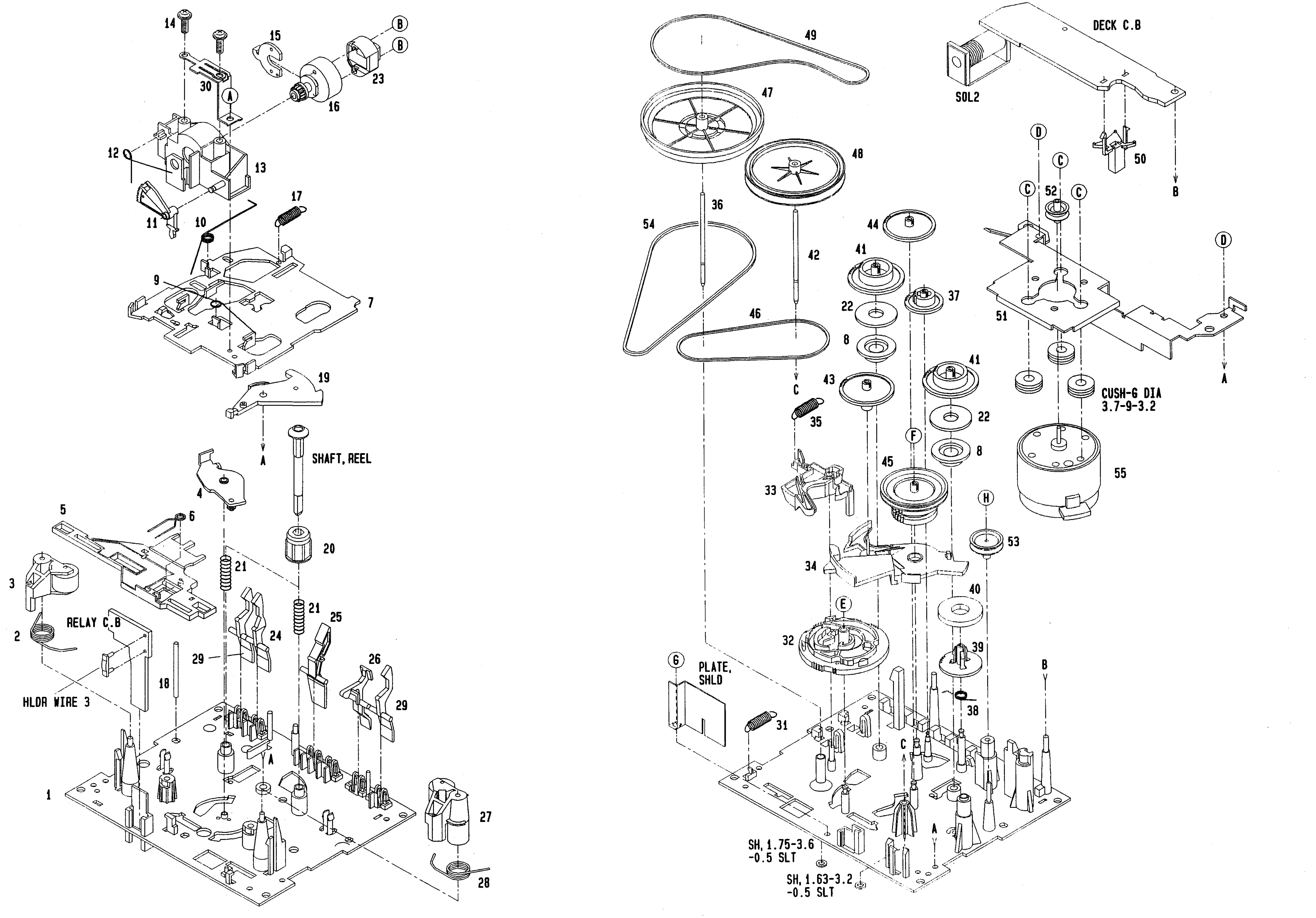
CON5	pin 4	+10V
IC6	pin 1	+7V
IC6	pin 3	+5V

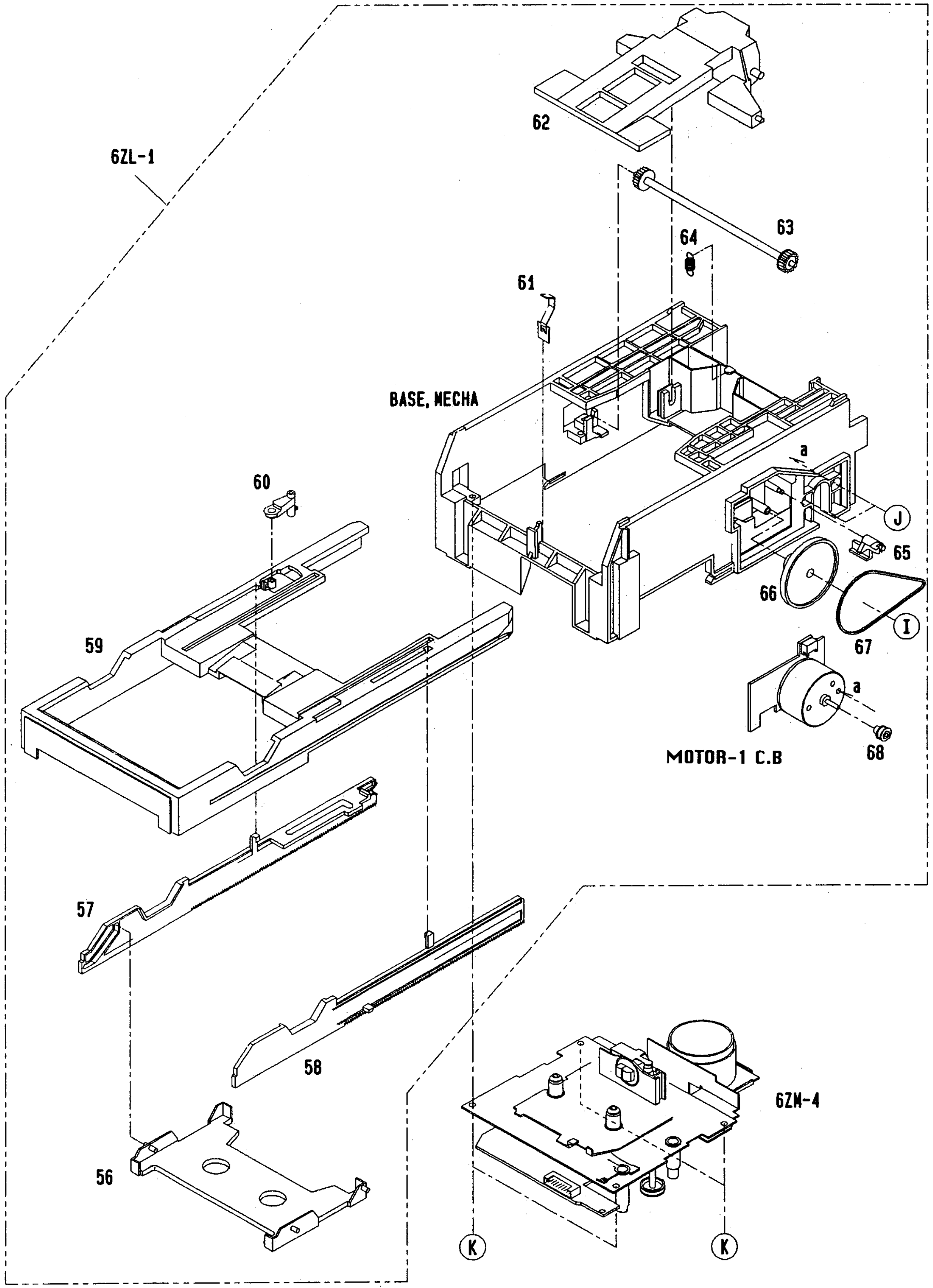
* Reference: IC check-point terminals



START
All FLs light.
Test mode is activated.
Is laser diode illumination normal?
No
APC circuit IC1 pins 62,63
Pickup check
Yes
Press the ■ key
Focus search mode
Note 1: Focus search operation is repeated
Are focus search operations normal?
No
Focus driver
IC1 pins 46,16 thru 8, IC4 pins 2,3,4
Pickup check, SYSCON check
IC1 pins 50~53, IC2 pins 54,56,57 and 61
Yes
Press ▶→■ key
Return to the start mode
Insert a disc
Press the ■ key
Focus search mode
Are focus error waveforms normal?
No
RF amplifier
IC1 pins 1,2,16,17,18,19,20
Pickup check
Yes
Press the ▶ key
Play mode
Is the disc operating?
No
DISC detection circuits
IC1 pin 49
Spindle drive check IC4 pins 14, 16, IC1 pins 26,27,39,40
Yes
Is the machine reading TOC?
No
Press the ■ key
Return to the start mode
Press the ⏮, ⏭ key
Sled mode
Are sled operations normal?
No
Sled driver
IC1 pins 29,30,31
IC4 pins 8,9,11
Sled mechanism check
Yes
Tracking servo loop check
IC1 pins 3,4,15,41
IC4 pins 20,21,23
Yes
Is the eye pattern normal?
No
Pickup lens cleaning
Pickup check
Yes
END

TAPE MECHANISM EXPLODED VIEW 1/1


14
30
A
15
16
23
B
B
12
13
17
11
10
9
7
19
A
SHAFT, REEL
4
5
6
20
3
21
21
25
RELAY C.B
2
24
29
26
18
29
HLDR WIRE 3
1
A
27
28
49
DECK C.B
47
SOL2
48
D
50
C
C
52
C
B
36
54
44
41
42
37
D
22
51
46
8
41
C
43
CUSH-G DIA
3.7-9-3.2
35
22
F
8
45
55
33
H
53
34
40
E
32
39
G
PLATE,
SHLD
B
38
31
C
A
SH, 1.75-3.6
-0.5 SLT
SH, 1.63-3.2
-0.5 SLT

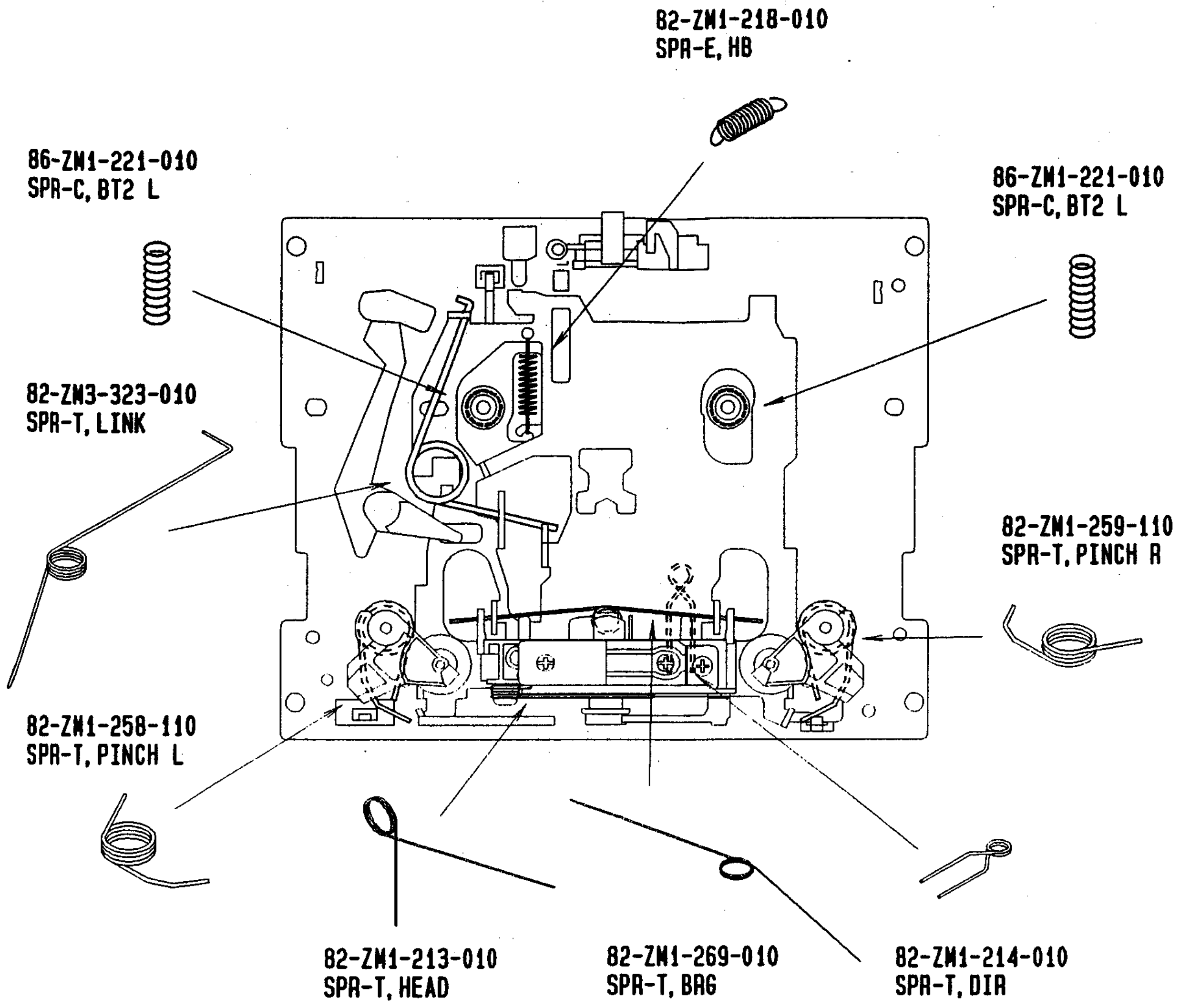


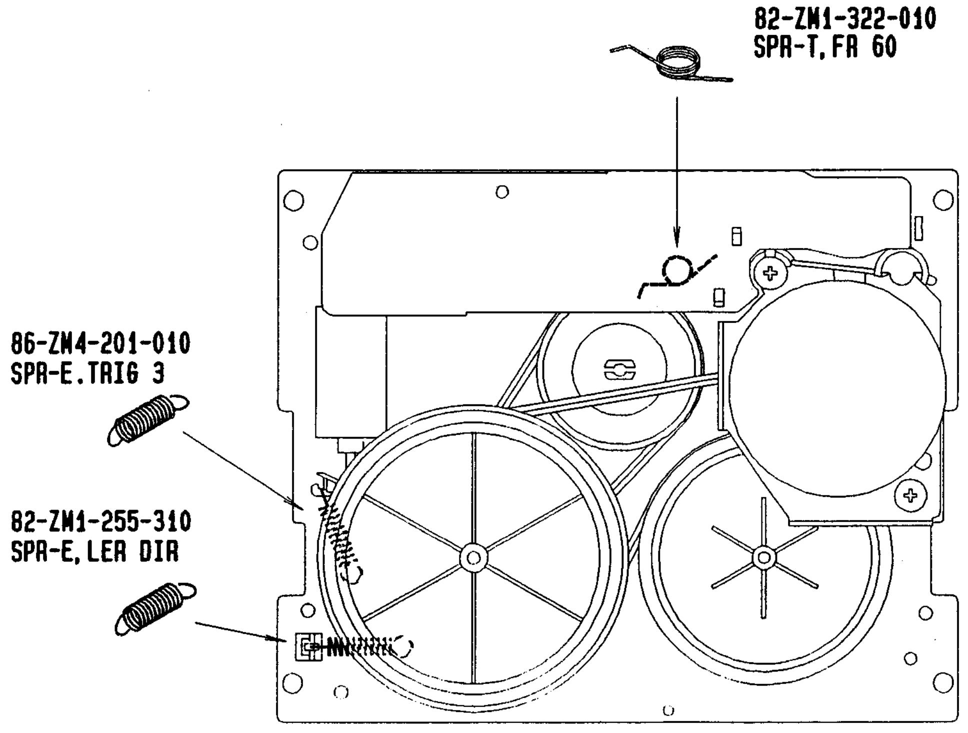
TAPE MECHANISM PARTS LIST 1/1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

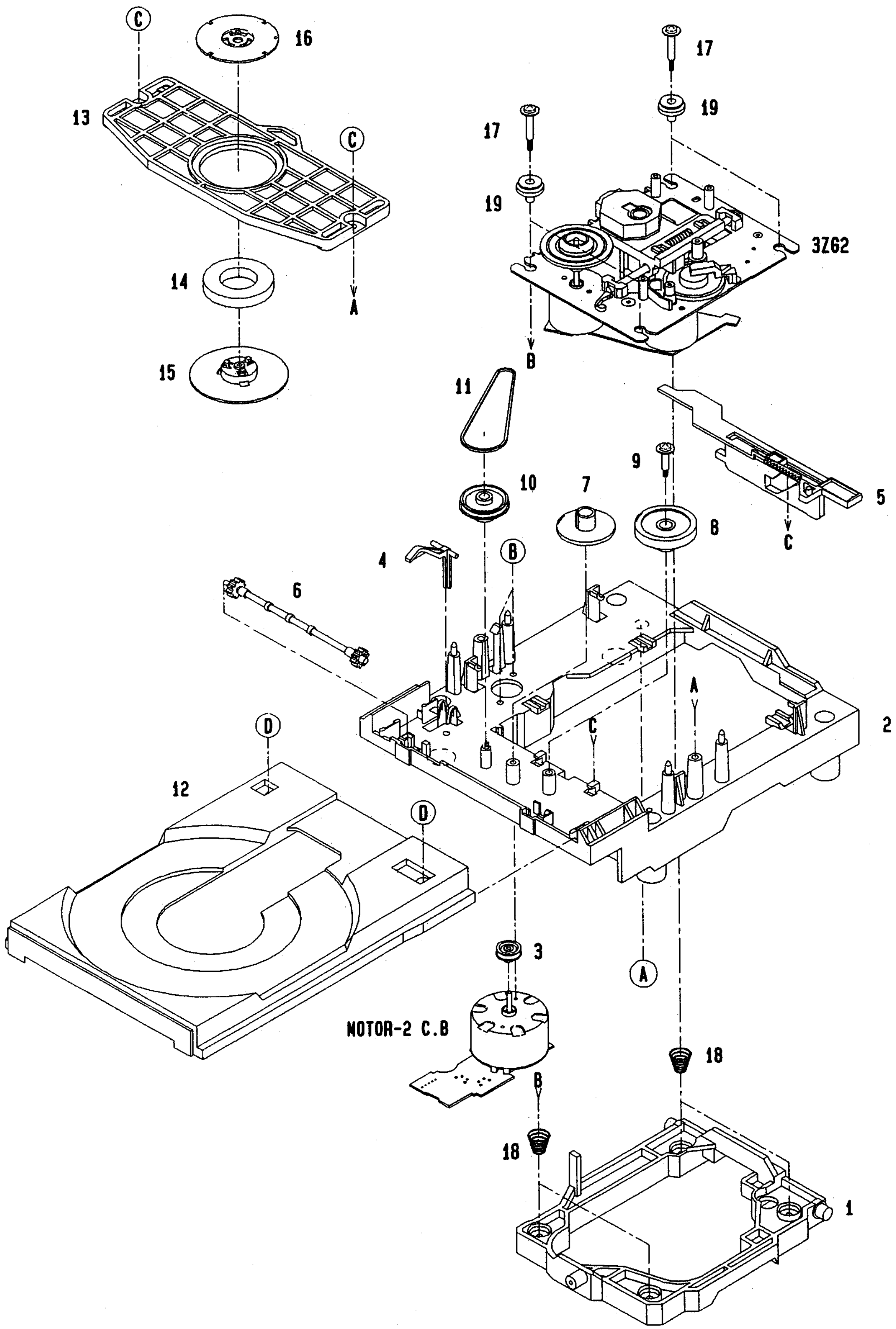
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZM1-218-010		CHAS ASSY,R
2	82-ZM1-258-110		SPR-T,PINCH L
3	86-ZM4-202-019		LVR ASSY,PINCH L3
4	82-ZM1-333-010		PLATE,LINK2
5	82-ZM1-266-110		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-910		CHAS,HEAD
8	86-ZM1-219-010		CLR,REEL SLIP
9	82-ZM1-269-210		SPR-T,BRG
10	82-ZM3-323-010		SPR-T,LINK 3
11	82-ZM1-210-110		GEAR,H T
12	82-ZM1-213-010		SPR-T,HEAD
13	82-ZM1-207-710		GUIDE,TAPE
14	82-ZM1-283-310		S-SCREW,AZIMUTH
15	82-ZM1-314-110		PLATE,HEAD
16	82-ZM1-208-310		HLDR,HEAD
17	82-ZM1-218-010		SPR-E,HB
18	82-ZM3-327-010		SHAFT,COUPLER N2
19	82-ZM1-222-210		LVR,PLAY
20	86-ZM1-203-010		CAP,REEL
21	86-ZM1-221-010		SPR-C,BT 2L
22	86-ZM1-220-010		FELT,DIA 5.3-14-0.8
23	87-046-399-110		HEAD,RPH YK56R-BS409
24	82-ZM1-241-310		LVR,MC
25	82-ZM1-242-010		LVR,CAS
26	82-ZM1-243-010		LVR,STOP
27	86-ZM4-204-019		LVR ASSY,PINCH R3
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-110		LVR,REC
30	82-ZM1-298-010		SPR-P EARTH
31	82-ZM1-255-310		SPR-E,LVR DIR
32	82-ZM1-221-110		GEAR,CAM
33	82-ZM1-227-210		LVR,TRIG
34	82-ZM1-224-410		LVR,FR
35	86-ZM4-201-010		SPR-E,TRIG 3
36	82-ZM1-239-010		CAPSTAN,2.2-41.7
37	82-ZM1-223-010		GEAR,PLAY
38	82-ZM1-322-010		SPR-T,FR 60
39	82-ZM1-220-210		GEAR,IDLER
40	82-ZM1-316-010		RING,MAGNET 3
41	82-ZM1-216-310		GEAR,REEL
42	82-ZM1-236-010		CAPSTAN,2-41.5
43	82-ZM1-225-210		GEAR,FR
44	82-ZM1-226-010		GEAR,REW
45	82-ZM3-333-210		SLIP DISK ASSY 2
46	82-ZM1-338-110		BELT,FR 4
47	86-ZM1-216-210		FLY-WHL,R L
48	82-ZM3-330-010		FLY-WHL,L2 W
49	86-ZM1-206-010		BELT,MAIN L
50	82-ZM1-245-210		HLDR,IC
51	86-ZM1-215-010		HLDR,MOT L
52	82-ZM1-247-210		PULLEY,MOTOR
53	82-ZM3-335-010		PULLEY,COUPLER M3
54	86-ZM1-217-010		BELT,MOT
55	87-A90-343-010		MOT,SHU2R 70
56	86-ZL1-203-010		TRAY,CAS
57	86-ZL1-204-010		LEVER,SLIDE L
58	86-ZL1-205-010		LEVER,SLIDE R
59	86-ZL1-202-010		FRAME,CAS
60	86-ZL1-209-010		LEVER,LOCK
61	86-ZL1-214-010		SPR-P,CAS
62	86-ZL1-211-010		ARM,CLAMP
63	86-ZL1-206-010		GEAR,TRAY
64	86-ZL1-213-010		SPR-E,CLAMP
65	86-ZL1-208-010		LEVER,SW
66	86-ZL1-207-010		GEAR,PULLEY
67	86-ZL1-212-010		BELT,L
68	86-ZL1-210-010		PULLEY,MOT
A	82-ZM1-315-010		S-SCREW GUIDE TAPE
B	80-ZM6-207-010		V+1.6-7
C	82-ZM3-318-110		S-SCREW MOTOR M2
D	87-067-178-010		VTT+2.6-3
E	87-B10-008-010		W-P,2.08-8-0.4 SLIT
F	82-ZM3-334-010		PW,2.16-6-0.4
G	87-571-032-410		VIT+2-3
H	87-B10-043-010		W-P,0.99-4-0.25 SLT
I	83-ZG3-217-010		S-SCREW,GEAR D
J	87-251-072-410		U+2.6-5
K	87-067-660-010		BVT2+3-8 W/0 SL0T BLK

SPRING APPLICATION POSITION


82-ZM1-218-010
SPR-E, HB
86-ZM1-221-010
SPR-C, BT2 L
86-ZM1-221-010
SPR-C, BT2 L
82-ZM3-323-010
SPR-T, LINK
82-ZM1-259-110
SPR-T, PINCH R
82-ZM1-258-110
SPR-T, PINCH L
82-ZM1-213-010
SPR-T, HEAD
82-ZM1-269-010
SPR-T, BRG
82-ZM1-214-010
SPR-T, DIR


82-ZM1-322-010
SPR-T, FR 60
86-ZM4-201-010
SPR-E.TRIG 3
82-ZM1-255-310
SPR-E, LER DIR

CD MECHANISM EXPLODED VIEW 1/2

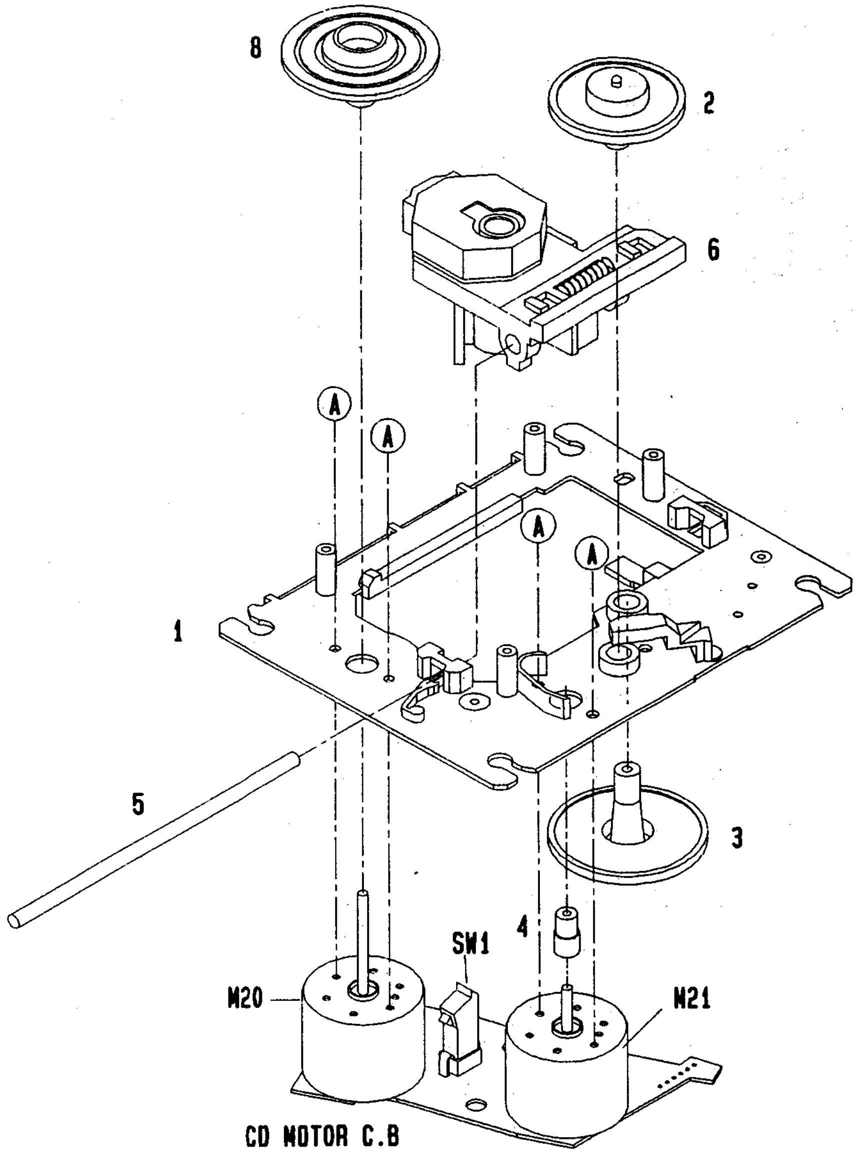

C
16
13
C
14
A
15
17
19
17
19
3ZG2
B
11
9
10
7
8
5
C
4
B
6
A
C
2
D
12
D
3
A
MOTOR-2 C.B
18
B
18
1

CD MECHANISM PARTS LIST 1/2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG3-202-01K		HLDR,MECH
2	83-ZG3-228-21K		CHAS,L6
3	83-ZG3-208-01K		PULLEY,MOTOR
4	83-ZG3-213-01K		LVR,SW
5	83-ZG3-209-01K		CAM,SLIDE
6	83-ZG3-207-01K		GEAR,TRAY
7	83-ZG3-204-01K		GEAR,C
8	83-ZG3-205-01K		GEAR,D
9	83-ZG3-217-019		S-SCREW,GEAR D
10	83-ZG3-220-11K		GEAR,PULLEY 2
11	83-ZG3-214-019		BELT,L
12	83-ZG3-203-61K		TRAY,CD
13	83-ZG3-210-01K		HLDR,CHUCK
14	83-ZG3-602-010		RING,MAG
15	83-ZG3-212-01K		CAP,DISC
16	83-ZG3-219-01K		PLATE,CLAMP
17	81-ZG1-254-019		S-SCEW,MECH HLDR
18	83-ZG3-216-019		SPR-C,L
19	83-ZG3-215-019		CUSH-G,MAIN
A	87-067-945-119		VFT2+3-12(F10)
B	87-251-071-119		U+2.6-4
C	87-512-074-219		VFT2+2.6-8
D	87-352-075-219		VT2+2.6-10

CD MECHANISM EXPLODED VIEW 2/2

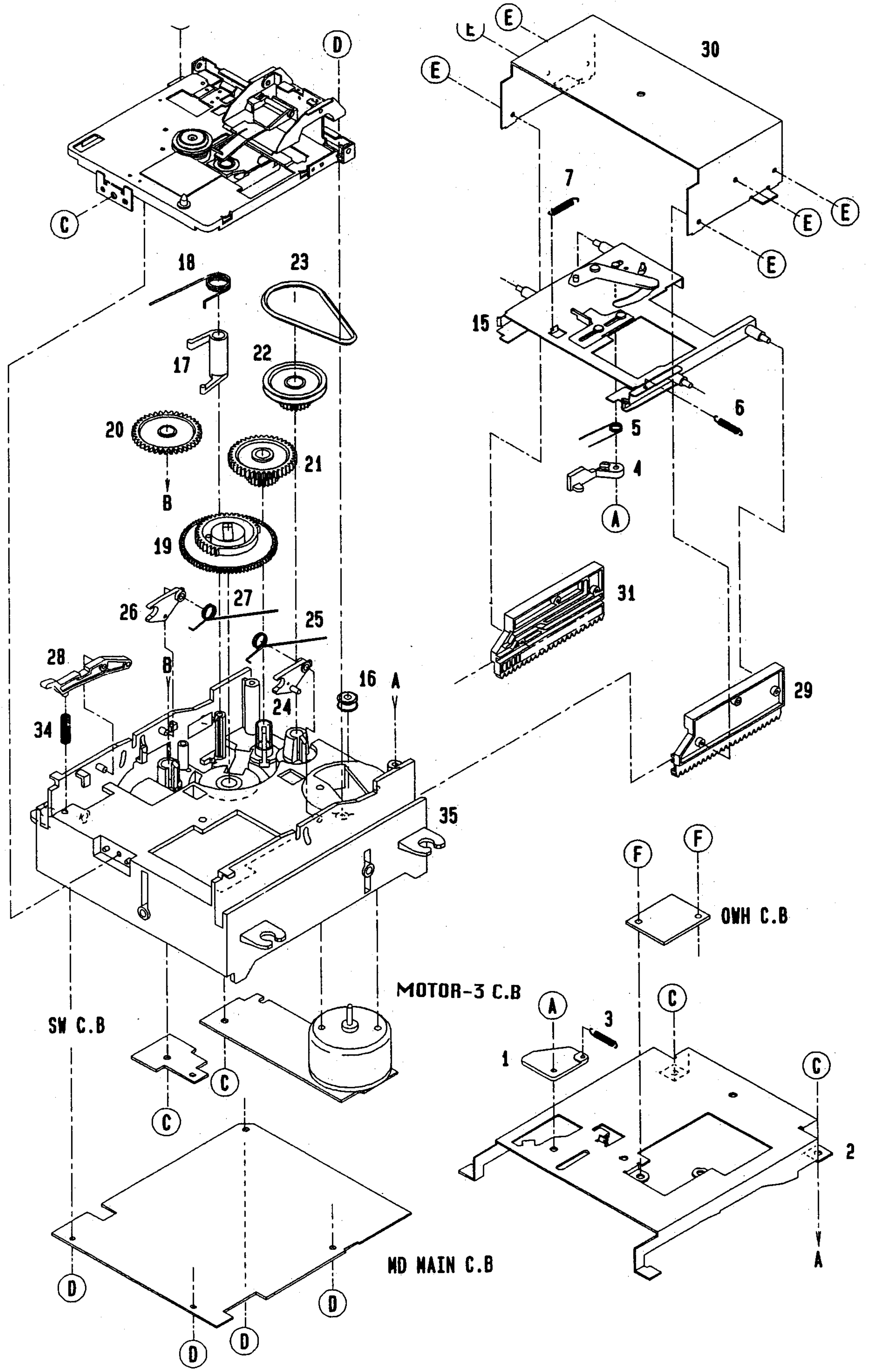


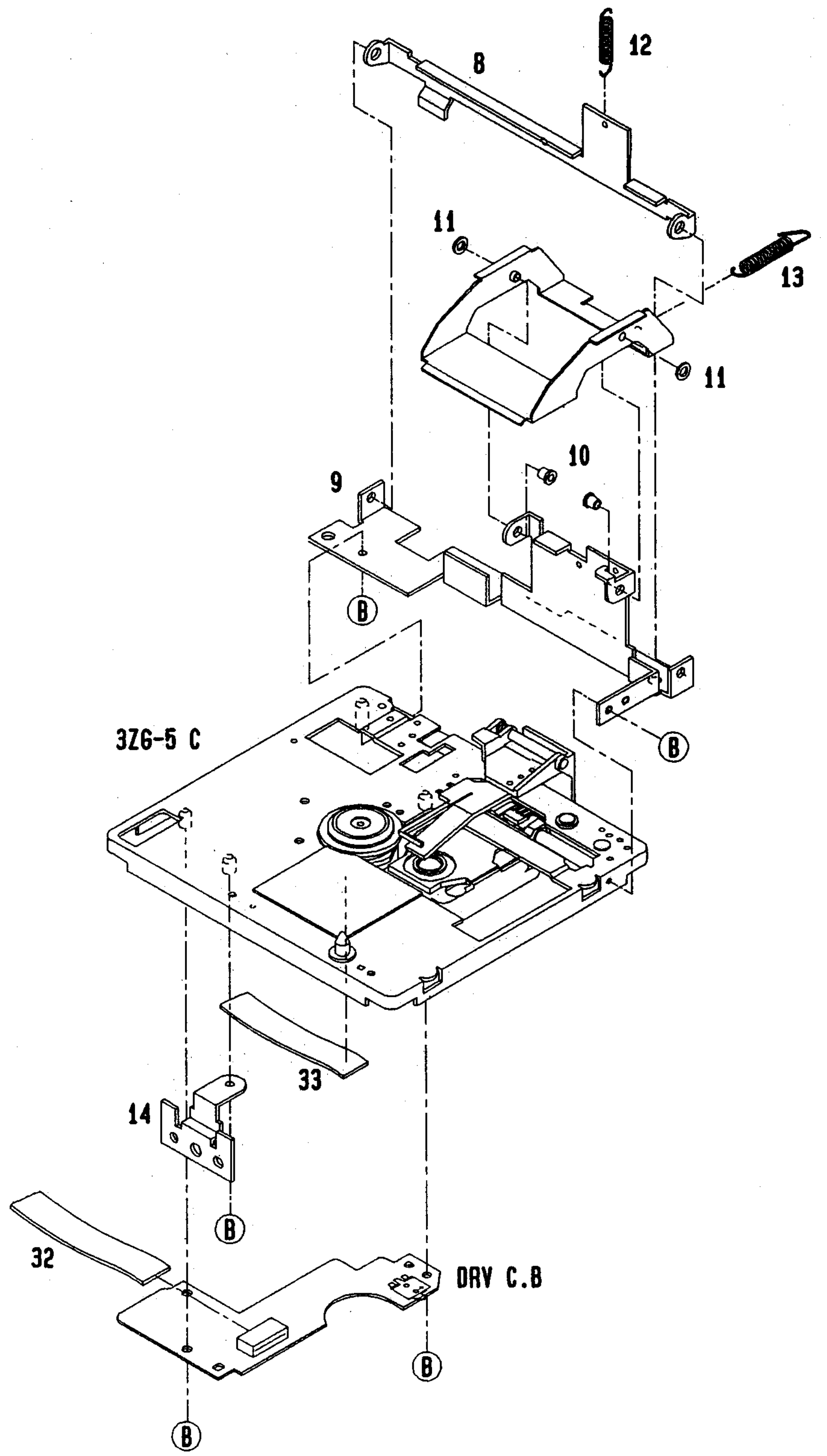
CD MECHANISM PARTS LIST 2/2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-202-71K		O-SERT S ASSY,S
2	83-ZG2-204-419		GEAR,A
3	83-ZG2-205-219		GEAR,B
4	83-ZG2-220-01K		GEAR MOTOR 2
5	83-ZG2-207-119		SHAFT,SLIDE
6	87-070-109-019		KSS 212A,PICKUP UNIT
8	83-ZG2-233-019		TURN TABLE,A5
A	87-261-032-219		SCREW V+2-3

MD MECHANISM EXPLODED VIEW 1 / 2


D
E
E
E
30
E
E
E
C
18
23
7
15
17
22
6
20
21
5
4
B
A
19
31
26
27
25
28
B
24
16
A
29
34
35
F
F
OWH C.B
MOTOR-3 C.B
A
3
C
SW C.B
1
C
C
C
2
MD MAIN C.B
A
D
D
D
D
D

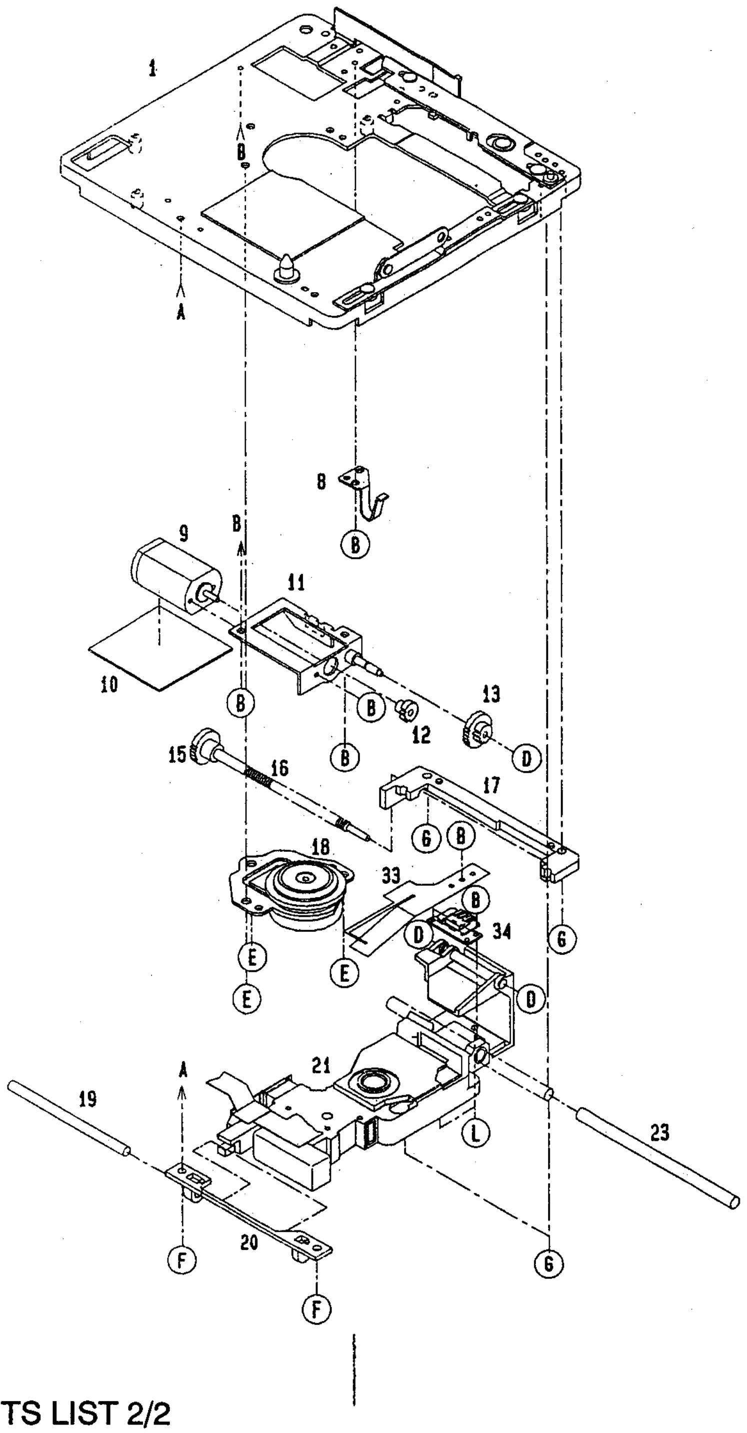

12
8
11
13
11
10
9
B
B
3ZG-5 C
33
14
B
32
DRV C.B
B
B

MD MECHANISM PARTS LIST 1/2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZG2-226-010		GUIDE,EJECT
2	86-ZG2-250-010		HLDR ASSY,LOADING
3	86-ZG2-238-010		SPR-E,GUIDE EJECT
4	86-ZG2-213-010		LEVER,CTRG
5	86-ZG2-232-010		SPR-T,LVR CTRG
6	86-ZG2-233-010		SPR-E,PLATE LIMIT
7	86-ZG2-260-010		SPR,E LEVER SHUTTER
8	86-ZG2-241-010		PLATE,REC
9	86-ZG2-242-010		PLATE,MD R
10	86-ZG2-258-010		SHAFT 1.8-1.4
11	86-ZG2-259-010		WP,1.5-4-0.3 BSU WO ADH
12	86-ZG2-243-010		SPR-E,PLATE HEAD
13	86-ZG2-244-010		SPR-E,PLATE REC
14	86-ZG2-231-010		HLDR,MD F
15	86-ZG2-201-010		CHAS,LOADING
16	81-ZG1-212-010		PULLY,LOAD MO
17	86-ZG2-225-010		LEVER,LOCK
18	86-ZG2-237-010		SPR-T,LVR LOCK
19	86-ZG2-229-010		GEAR,ASSIST
20	86-ZG2-230-010		GEAR,IDLE H
21	86-ZG2-228-010		GEAR,RELAY
22	86-ZG2-227-010		PULLEY,LOADING
23	86-ZG2-247-010		BELT,LOADING
24	86-ZG2-208-010		LEVER,LOADING R
25	86-ZG2-235-010		SPR-T,LVR LOADING R
26	86-ZG2-207-010		LEVER,LOADING L
27	86-ZG2-234-010		SPR-T,LVR LOADING L
28	86-ZG2-224-010		LEVER,OPEN
29	86-ZG2-206-010		RACK,LOADING R
30	86-ZG2-223-010		HLDR,RACK
31	86-ZG2-205-010		RACK,LOADING L
32	86-ZG2-617-010		FF-CABLE,11P 0.5 125
33	85-HM1-605-010		FF-CABLE,4P 2 11MM
34	86-ZG2-202-010		HLDR ASSY,CTRG
35	86-ZG2-236-010		SPR-C,LVR OPEN
A	86-ZG2-253-010		W-P,1.7-6-0.3 B W/O
B	87-067-359-010		S-SCRW,+1.4-2.5(BLK)
C	87-067-659-010		BVT2+2.6-8W/O SLOT B
D	87-342-036-210		UT2+2-8
E	87-B10-024-310		VT2+1.7-6 W/O
F	87-351-530-310		VT2+1,7-45

MD MECHANISM EXPLODED VIEW 2 / 2

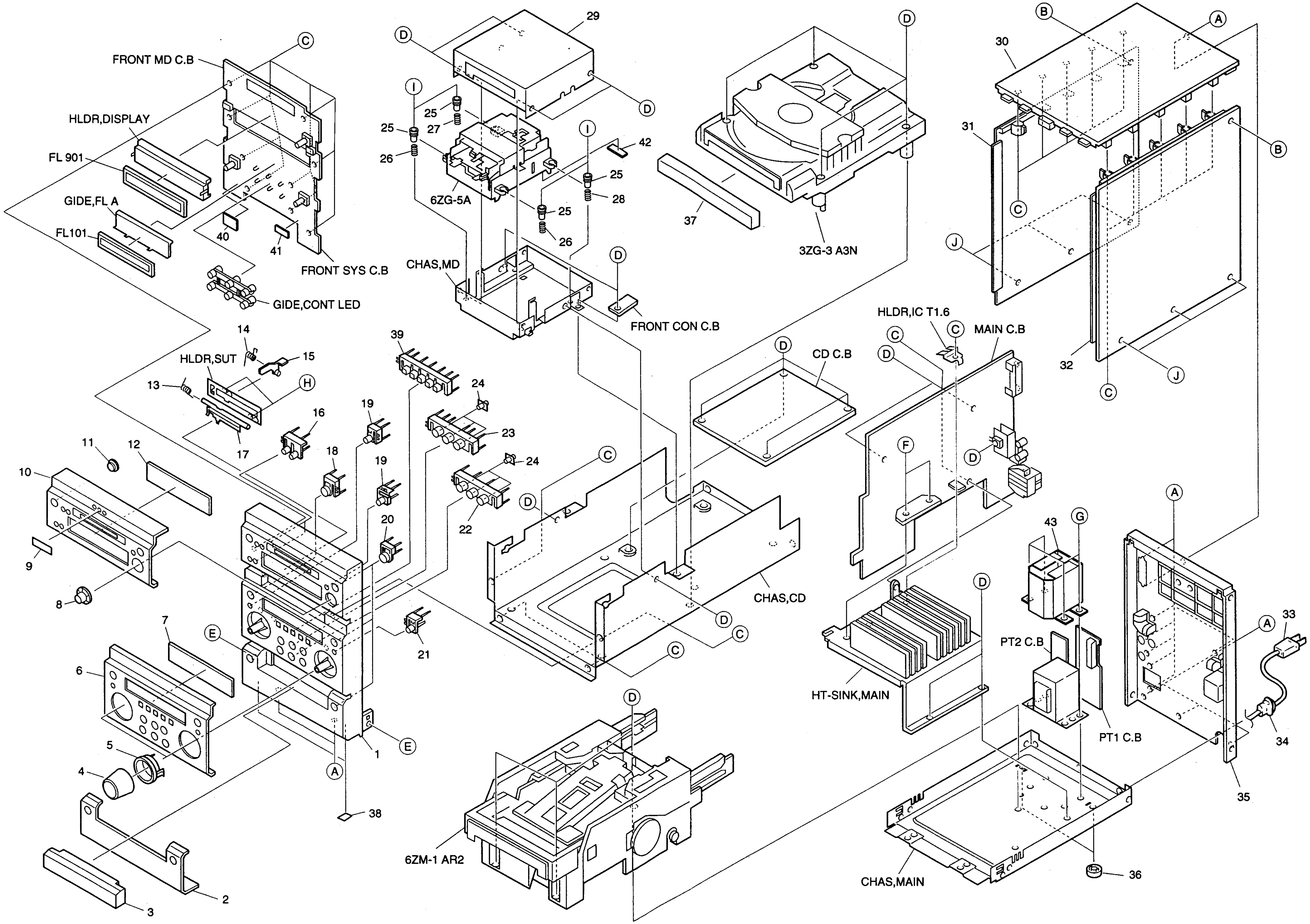


MD MECHANISM PARTS LIST 2/2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG5-290-010		CHAS,C ASSY
8	83-ZG5-265-010		SPR-P,GEAR P.U.
9	87-045-374-010		MOT,FFM20VK-7Z170
10	83-ZG5-277-010		SH,20-12-0.05
11	83-ZG5-261-010		HLDR,MOTOR P.U.ASSY
12	83-ZG5-268-010		GEAR,MOTOR P.U.
13	83-ZG5-267-010		GEAR,P.U.B
15	83-ZG5-266-010		GEAR,P.U.A
16	83-ZG5-254-110		SHAFT,PU GUIDE C
17	83-ZG5-253-110		HLDR,PU GUIDE B
18	87-045-373-110		MOT,SPINDOL
19	83-ZG5-250-010		SHAFT,P.U.GUIDE A
20	83-ZG5-252-110		HLDR,PU GUIDE A
21	83-ZG5-297-010		PICK UP ASSY,2
23	83-ZG5-251-010		SHAFT,P.U.GUIDE B
33	87-046-415-010		HEAD,RF320-74H
34	83-ZG5-247-110		SPR-P,INSERT ASSY
B	87-261-500-310		V+1.4-1.4 BLK(1)
D	87-078-123-010		PW,1.1-2.5-0.3 C
E	87-262-521-310		V+1.7-1.6 BLK
F	87-262-505-310		V+1.4-2.5 BLK(3)
G	87-262-507-310		V+1.4-3.0 BLK
L	87-262-523-310		V+1.7-2 BLK(3)

MECHANICAL EXPLODED VIEW 1 / 1


29
D
D
D
B
A
30
C
FRONT MD C.B
I
25
27
25
26
I
42
25
28
25
26
6ZG-5A
HLDR,DISPLAY
FL 901
GIDE,FL A
FL101
40
41
FRONT SYS C.B
CHAS,MD
D
FRONT CON C.B
GIDE,CONT LED
37
3ZG-3 A3N
31
B
C
J
J
32
C
14
15
HLDR,SUT
13
H
39
24
23
24
16
19
18
19
17
11
12
10
22
20
9
8
7
6
5
4
E
E
1
A
38
21
D
C
D
CD C.B
CHAS,CD
D
C
C
D
6ZM-1 AR2
HLDR,IC T1.6
C
MAIN C.B
C
D
D
F
43
G
A
A
33
D
PT2 C.B
HT-SINK,MAIN
PT1 C.B
34
35
CHAS,MAIN
36

MECHANICAL PARTS LIST 1/1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-CE1-001-010		CABI,FR
2	87-CE1-006-010		PANEL,C
3	87-CV2-008-010		PANEL,CASS
4	87-CE1-017-110		KNOB,RTRY VOL
5	87-CE1-019-010		RING,VOL
6	87-CE1-005-010		PANEL,B
7	87-CE1-010-210		WINDOW,CENTER
8	87-CC1-015-010		KNOB,RTRY DIAL
9	87-CU2-009-010		BADGE,AIWA 30(S) 30
10	87-CE1-004-010		PANEL,A
11	87-CE1-020-010		LENS,SENSOR
12	87-CE1-009-210		WINDOW,MD
13	85-NC1-210-110		SPR-T,PANEL
14	85-NC1-209-010		SPR-T,LVR
15	85-NC1-205-210		LEVER,OPEN
16	87-CE1-011-010		BTN,MD
17	87-CC1-010-010		PANEL,DISC
18	87-CC1-012-010		KEY,POWER
19	87-CE1-015-010		BTN,MODE
20	87-CC1-013-010		KEY,EJECT
21	87-CE1-016-010		BTN,DEMO
22	87-CE1-014-010		BTN,CONT B
23	87-CE1-013-010		BTN,CONT A
24	87-CE1-021-010		LENS,CONT
25	85-NC1-207-010		DMPR,MECHA
26	85-NC1-208-110		SPR-C,MECHA F
27	85-NC1-213-110		SPR-C,MECHA L
28	85-NC1-212-110		SPR-C,MECHA R
29	87-CE1-204-110		COVER, MD
30	87-CE1-002-010		PANEL,TOP
31	87-CE1-025-010		PANEL,SIDE R
32	87-CE1-024-010		PANEL,SIDE L
⚠ 33	87-050-079-010		AC CORD ASSY,E BLK<EZ>
⚠ 33	87-050-053-010		AC CORD ASSY,U-2<U>
34	87-085-185-010		BUSHING,AC CORD(E) CM-22B<EZ>
34	87-085-189-010		BUSHING,AC CORD(U) CM-22C<U>
35	87-CE1-033-010		PANEL,REAR EZ<EZ>
35	87-CE1-031-010		PANEL,REAR U<U>
36	81-669-025-010		FOOT,H11
37	87-CE1-007-010		PANEL,CD
38	80-VT1-202-010		FELT,12.5-15.5-2
39	87-CE1-023-010		BTN,FUNC ASSY
40	87-CE1-209-010		PLATE,DISPLAY
41	87-CE1-211-010		PLATE,DISPLAY A
42	87-CE1-214-010		FELT,10-40
43	87-CE1-605-010		SHLD-PLATE,PT
A	87-067-761-010		BVT2+3-10 BLK
B	87-744-095-410		UT2+3-8 W/O SLOT CR
C	87-067-703-010		BVT2+3-10 W/O SLOT
D	87-067-584-010		BVT2+3-6 W/O SLOT
E	87-723-095-410		QT2+3-8 W/O SLOT BLK
F	87-067-581-010		BVT2+3-15 W/O SLOT
G	87-067-585-010		BVTT+4-6
H	87-651-074-410		VT1+2.6-8
I	85-NC1-211-010		S-SCREW,MECHA
J	87-B10-068-010		UTT2+3-6 W/O SLOT CR

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

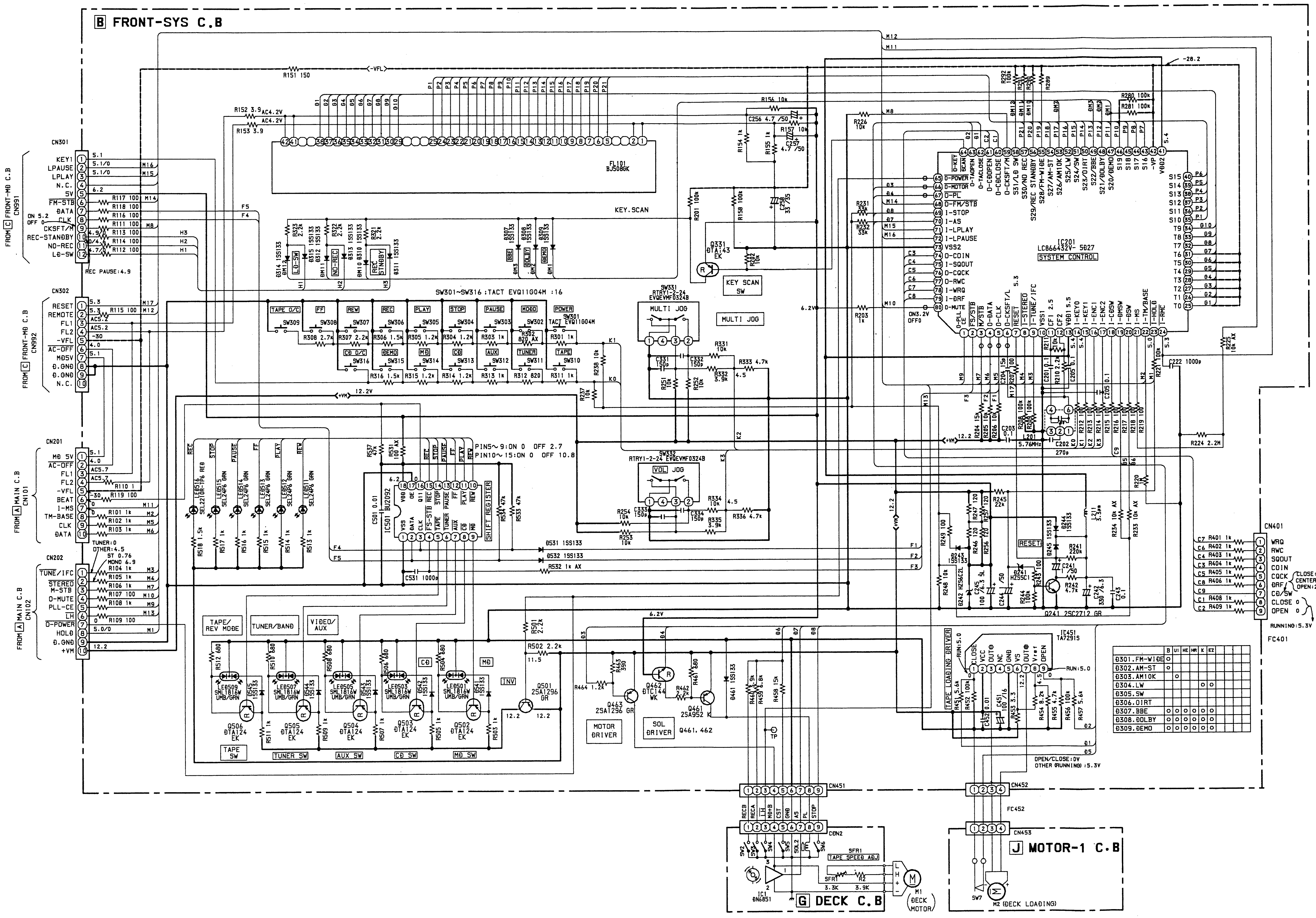
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-CE1-905-010		IB,U(ESF)I<U>
1	87-CE1-907-010		IB,E(EGFSI)I<EZ>
2	87-CL1-951-010		RC,UNIT,RC-6AS19
3	87-006-225-010		ANT,LOOP ANT NC2
4	87-A90-064-010		FEEDER-ANT,FM(SHS)

SX-LM50 (T, TN,YLT, YUT, YTN, YJT) SPEAKER PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

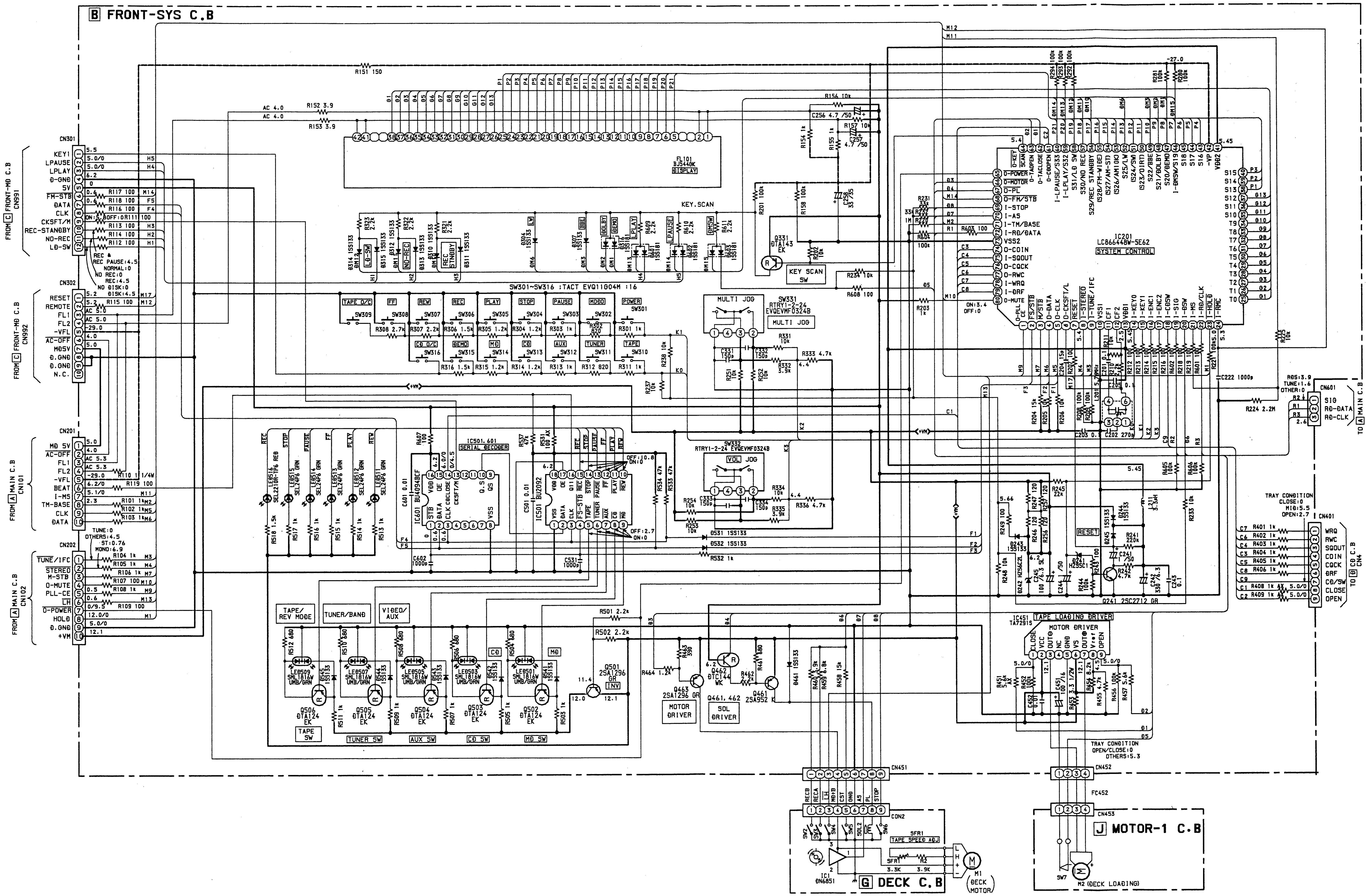
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-CP1-001-010		PANEL,FR
2	87-CP1-004-010		GRILLE,FRAME ASSY
3	86-CP1-610-010		TERMINAL,ASSY
4	86-CP1-602-010		SPKR,W 13 6OHM
5	86-CP1-604-010		SPKR,T 6 6OHM
6	83-096-614-010		SPEAKER CODE
7	87-CP1-003-010		PANEL,TW

SCHEMATIC DIAGRAM – 3 (FRONT – SYS : U)

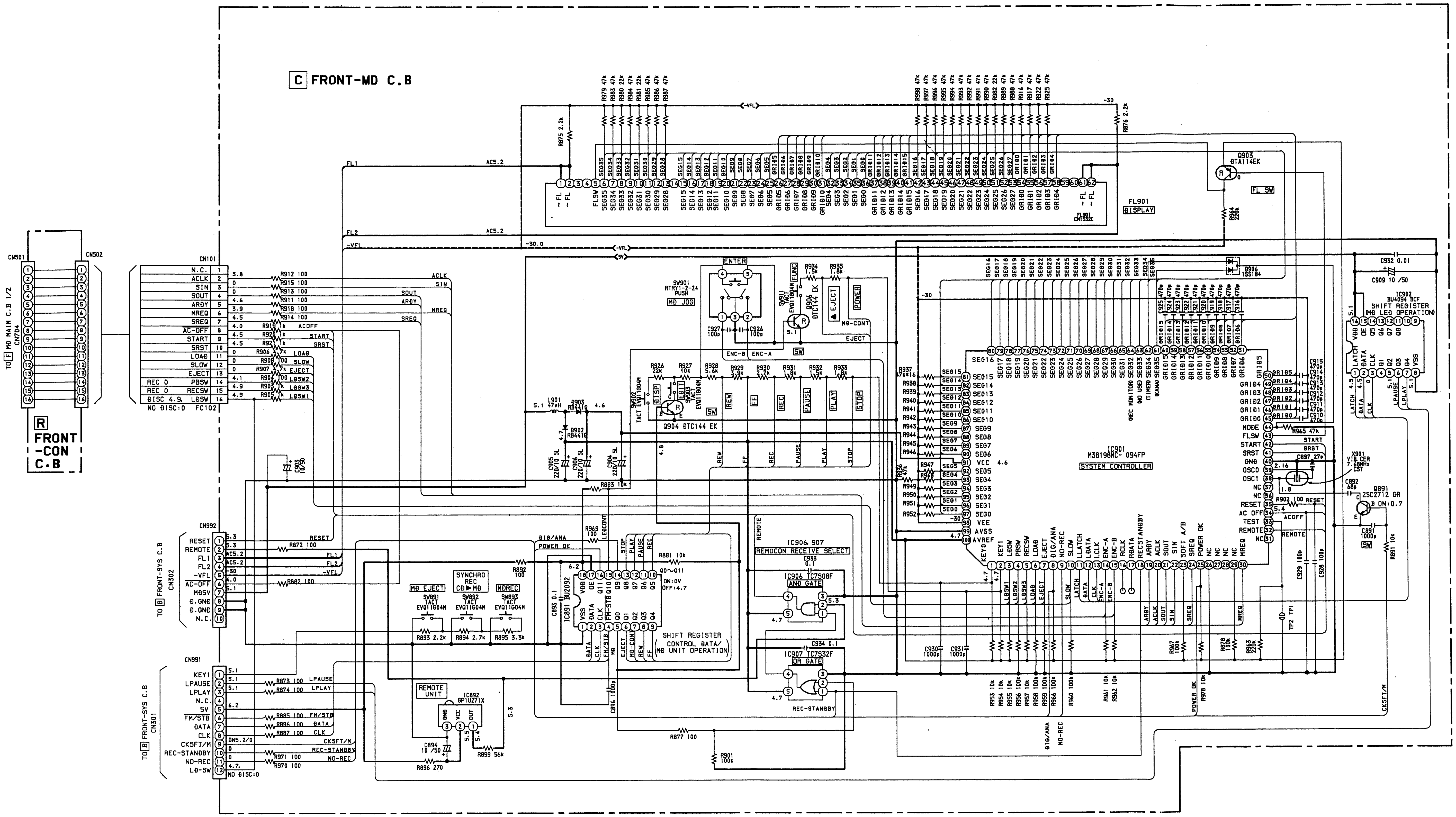

B FRONT-SYS C.B
FL101 BJ508GK
IC201 LC866432V-5027 SYSTEM CONTROL
IC501 BU2092 SHIFT REGISTER
SW301~SW316 :TACT EVQ11G04M :16
SW331 RTRY1-2-24 EVQEVMF0324B MULTI JOG
SW332 RTRY1-2-24 EVQEVMF0324B VOL JOG
KEY SCAN SW
MULTI JOG
KEY.SCAN
TAPE/REV MODE
TUNER/BAND
VIDEO/AUX
TAPE SW
TUNER SW
AUX SW
CD SW
MD SW
INV
MOTOR DRIVER
SOL DRIVER Q461, 462
TAPE LOADING DRIVER
IC451 TA7291S
RESET
PIN5~9:ON 0 OFF 2.7
PIN10~15:ON 0 OFF 10.8
CN301 FROM C FRONT-MD C.B CN991
CN302 FROM C FRONT-MD C.B CN992
CN201 FROM A MAIN C.B CN101
CN202 FROM A MAIN C.B CN102
CN401 TO D CD C.B CN4
FC401
RUNNING:5.3V
CLOSE:0V CENTER:5.5V OPEN:2.7V
OPEN/CLOSE:0V OTHER (RUNNING) :5.3V
CN451
CN452
FC452
CN453
J MOTOR-1 C.B
SW7 M2 (DECK LOADING)
G DECK C.B
CN2
SFR1 TAPE SPEED ADJ
IC1 BN6851
M1 (DECK MOTOR)
L H + -

	B	U1	HE	HR	K	EZ				
D301.FM-WIDE	○									
D302.AM-ST	○									
D303.AM10K		○								
D304.LW					○	○				
D305.SW										
D306.OIRT										
D307.BBE	○	○	○	○	○	○				
D308.DOLBY	○	○	○	○	○	○				
D309.DEMO	○	○	○	○	○	○				

SCHEMATIC DIAGRAM – 4 (FRONT – SYS : EZ)

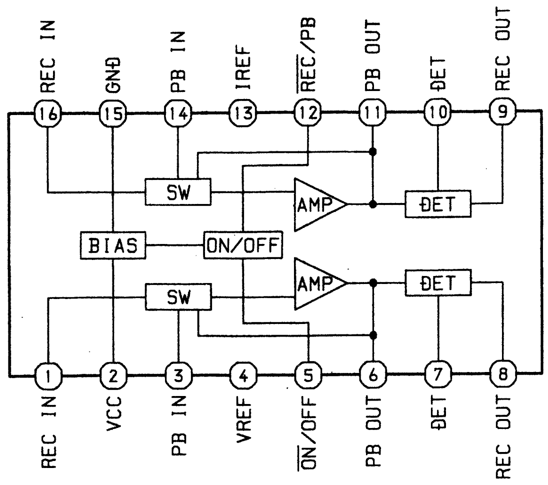

B FRONT-SYS C.B
FL101 BJ544GK DISPLAY
IC201 LC866448W-5E62 SYSTEM CONTROL
KEY.SCAN
KEY SCAN SW
Q331 DTA143 EK
MULTI JOG
SW331 RTRY1-2-24 EVQEVMF0324B
SW332 RTRY1-2-24 EVQEVMF0324B
VOL JOG
SW301~SW316 :TACT EVQ11G04M :16
TAPE D/C
FF
REW
REC
PLAY
STOP
PAUSE
MODE
POWER
CD D/C
DEMO
MD
CD
AUX
TUNER
TAPE
LD-SW
ND-REC
REC STANDBY
IC501, 601 SERIAL DECODER
IC601 BU4094BCF
IC501 BU2092
RESET
Q241 2SC2712 GR
IC451 TA7291S
TAPE LOADING DRIVER
MOTOR DRIVER
TAPE/ REV MODE
TUNER/BAND
VIDEO/ AUX
TAPE SW
TUNER SW
AUX SW
CD SW
MD SW
Q501 2SA1296 GR INV
Q463 2SA1296 GR
MOTOR DRIVER
Q462 DTC144 WK
Q461 2SA952 K
Q461, 462 SOL DRIVER
CN301
FROM C FRONT-MD C.B CN991
CN302
FROM C FRONT-MD C.B CN992
CN201
FROM A MAIN C.B CN101
CN202
FROM A MAIN C.B CN102
CN601
TO A MAIN C.B CON700
CN401
TO D CD C.B CN4
TRAY CONDITION CLOSE:0 MID:5.5 OPEN:2.7
TRAY CONDITION OPEN/CLOSE:0 OTHERS:5.3
CN451
CN452
FC452
CN453
CON2
G DECK C.B
SFR1 TAPE SPEED ADJ
IC1 BN6851
M1 (DECK MOTOR)
J MOTOR-1 C.B
SW7
M2 (DECK LOADING)

SCHEMATIC DIAGRAM – 5 (FRONT – MD)

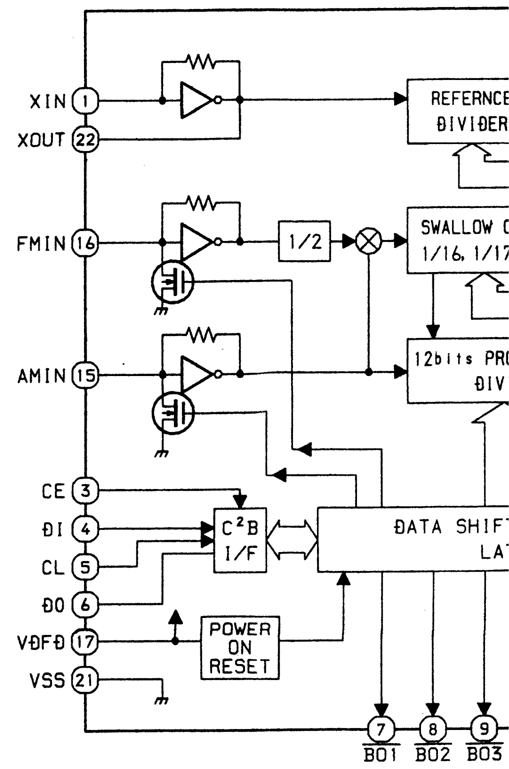

C FRONT-MD C.B
FL901
DISPLAY
Q903
DTA114EK
FL SW
IC901
M38198MC- 094FP
SYSTEM CONTROLLER
IC902
BU4094 BCF
SHIFT REGISTER
(MD LED OPERATION)
X901
VIB CER
Q891
2SC2712 GR
SW901
RTRY1-2-24
PUSH
MD JOG
ENTER
FUNC
EJECT
POWER
Q904 DTC144 EK
DISP
EDIT
REW
FF
REC
PAUSE
PLAY
STOP
IC891 BU2092
SHIFT REGISTER
CONTROL DATA/
(MD UNIT OPERATION)
IC906, 907
REMOCON RECEIVE SELECT
IC906 TC7S08F
AND GATE
IC907 TC7S32F
OR GATE
REMOTE UNIT
IC892
GP1U271X
MD EJECT
SYNCHRO REC
CD▶MD
MDREC
SW891 TACT EVQ11G04M
SW892 TACT EVQ11G04M
SW893 TACT EVQ11G04M
CN101
N.C.
ACLK
SIN
SOUT
ARDY
MREQ
SREQ
AC-OFF
START
SRST
LOAD
SLOW
EJECT
REC O PBSW
REC O RECSW
DISC 4.9 LDSW
NO DISC:0 FC102
CN501
CN502
TO F MD MAIN C.B 1/2 CN704
R FRONT -CON C.B
CN992
RESET
REMOTE
FL1
FL2
-VFL
AC-OFF
MD5V
D.GND
D.GND
N.C.
TO B FRONT-SYS C.B CN302
CN991
KEY1
LPAUSE
LPLAY
N.C.
5V
FM/STB
DATA
CLK
CKSFT/M
REC-STANDBY
NO-REC
LD-SW
TO B FRONT-SYS C.B CN301
NO DISC:0

IC BLOCK DIAGRAM – 2

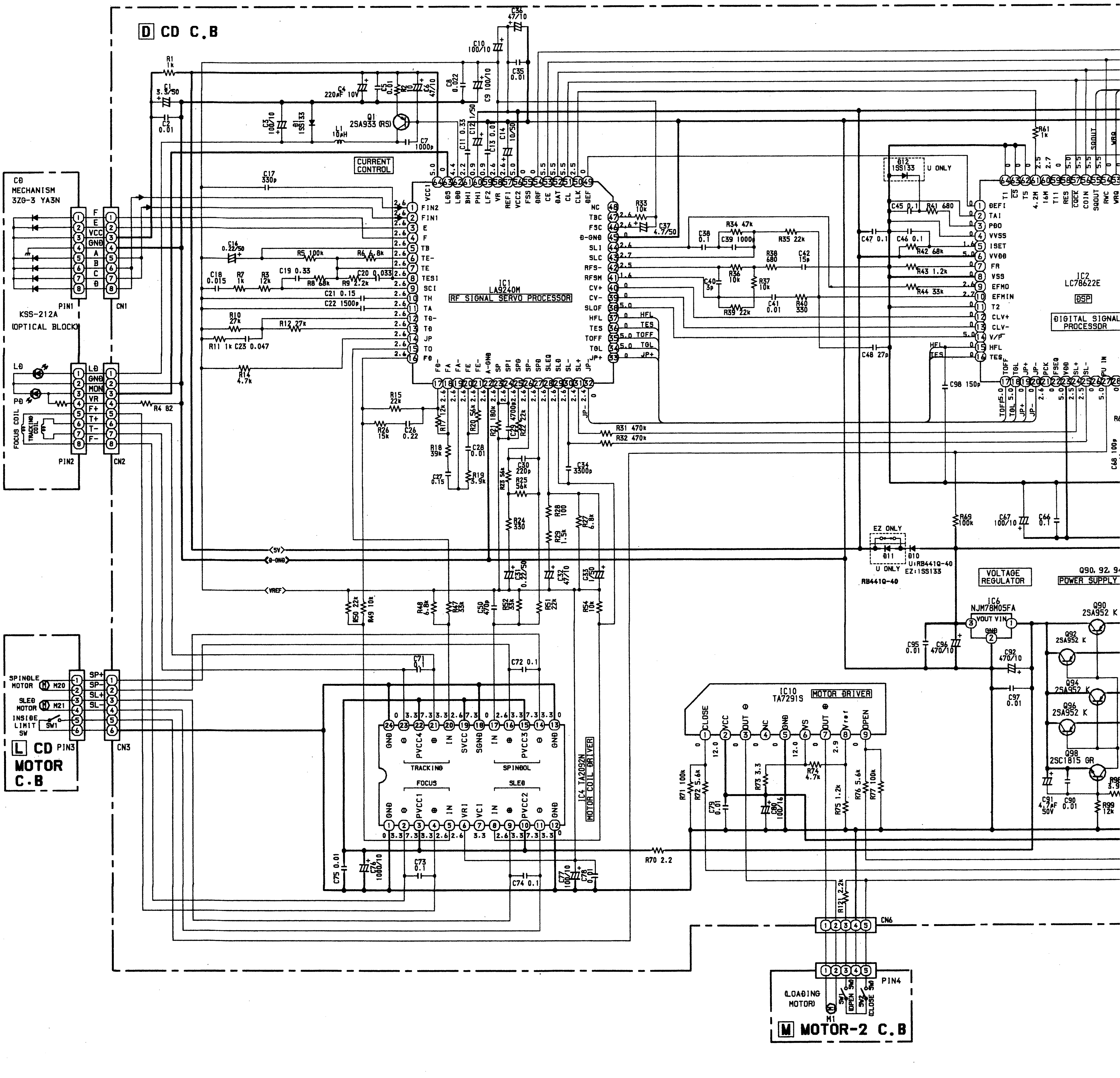
IC, HA12134A

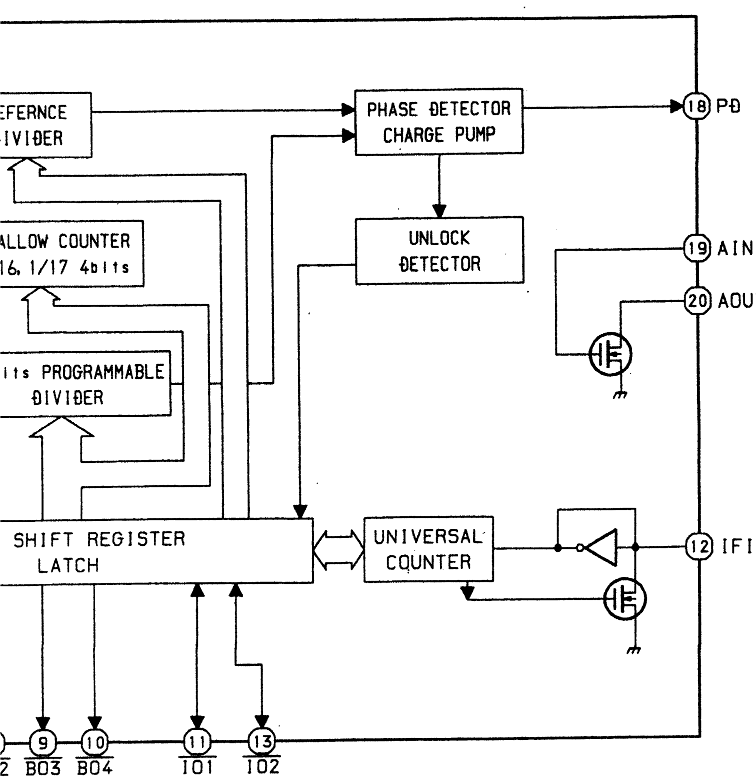

REC IN
GND
PB IN
IREF
REC/PB
PB OUT
DET
REC OUT
SW
AMP
DET
BIAS
ON/OFF
VCC
VREF
ON/OFF

IC, LC72131D

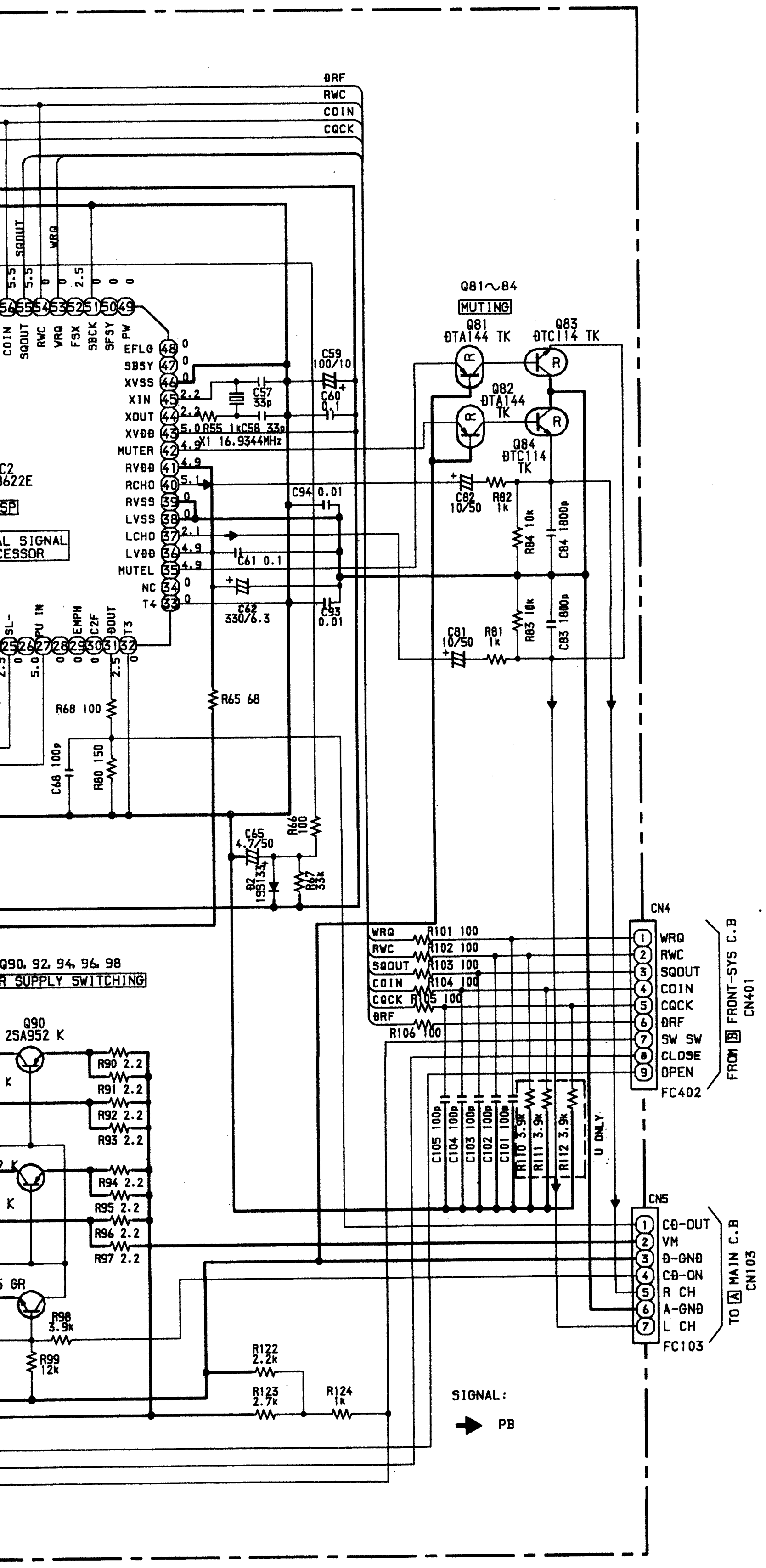

XIN
XOUT
FMIN
AMIN
CE
DI
CL
DO
VDFD
VSS
REFERNCE
DIVIDER
1/2
SWALLOW
1/16, 1/17
12bits PR
DIV
C²B
I/F
DATA SHIFT
POWER
ON
RESET
BO1
BO2
BO3

SCHEMATIC DIAGRAM – 6 (CD)


D CD C.B
CD MECHANISM 3ZG-3 YA3N
KSS-212A (OPTICAL BLOCK)
PIN1
CN1
PIN2
CN2
FOCUS COIL
TRACKING COIL
CURRENT CONTROL
IC1 LA9240M
RF SIGNAL SERVO PROCESSOR
Q1 2SA933 (RS)
IC2 LC78622E
DSP
DIGITAL SIGNAL PROCESSOR
IC4 TA2092N
MOTOR COIL DRIVER
TRACKING
SPINDOL
FOCUS
SLED
SPINDLE MOTOR M20
SLED MOTOR M21
INSIDE LIMIT SW SW1
L CD MOTOR C.B
PIN3
CN3
IC10 TA7291S
MOTOR DRIVER
VOLTAGE REGULATOR
IC6 NJM78M05FA
Q90, 92, 9
POWER SUPPLY
Q90 2SA952 K
Q92 2SA952 K
Q94 2SA952 K
Q96 2SA952 K
Q98 2SC1815 GR
EZ ONLY
U ONLY
D12 1SS133
CN6
PIN4
LOADING MOTOR
M1
M MOTOR-2 C.B

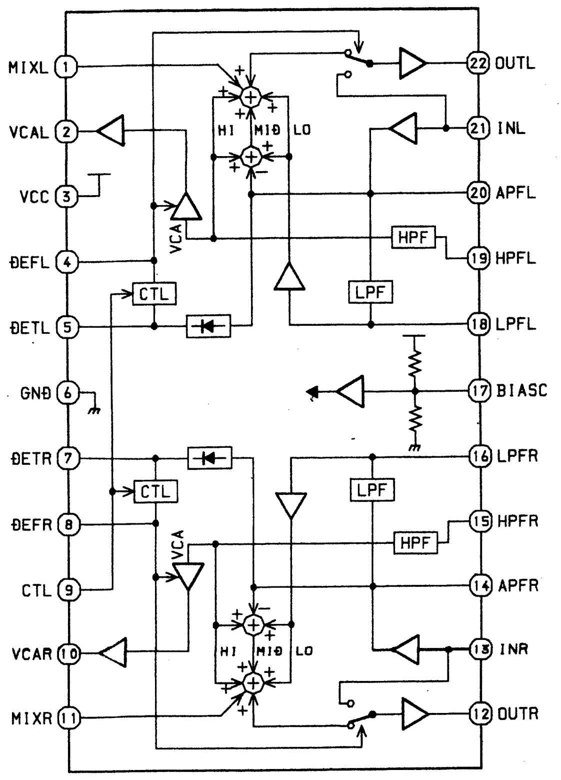


EFERNCE
IVIDER
PHASE DETECTOR
CHARGE PUMP
PD
ALLOW COUNTER
16, 1/17 4bits
UNLOCK
DETECTOR
AIN
AOUT
its PROGRAMMABLE
DIVIDER
SHIFT REGISTER
LATCH
UNIVERSAL
COUNTER
IFIN
BO3
BO4
IO1
IO2



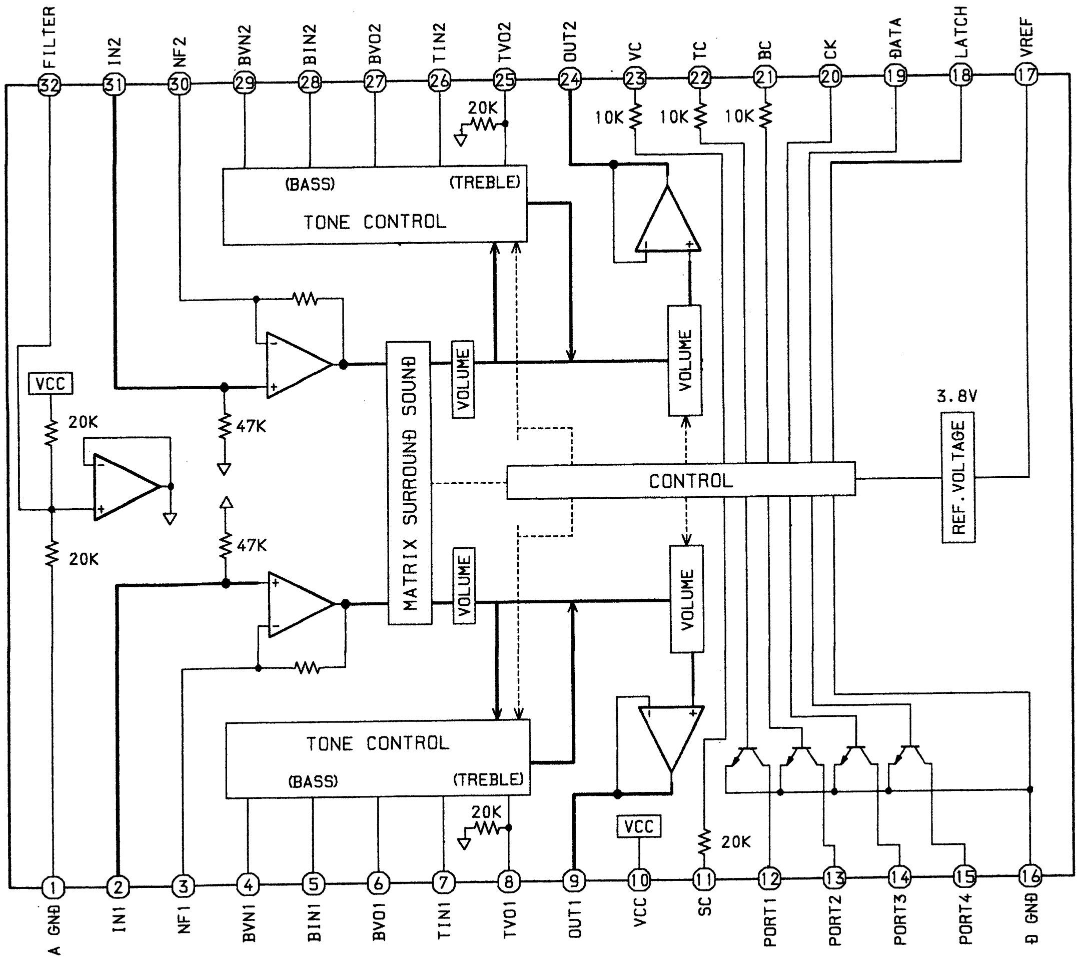
Q81~84
MUTING
Q81 DTA144 TK
Q83 DTC114 TK
Q82 DTA144 TK
Q84 DTC114 TK
Q90, 92, 94, 96, 98
R SUPPLY SWITCHING
Q90 2SA952 K
CN4
WRQ
RWC
SQOUT
COIN
CQCK
DRF
SW SW
CLOSE
OPEN
FC402
FROM B FRONT-SYS C.B CN401
CN5
CD-OUT
VM
D-GND
CD-ON
R CH
A-GND
L CH
FC103
TO A MAIN C.B CN103
U ONLY
SIGNAL:
PB

IC, BA3880S



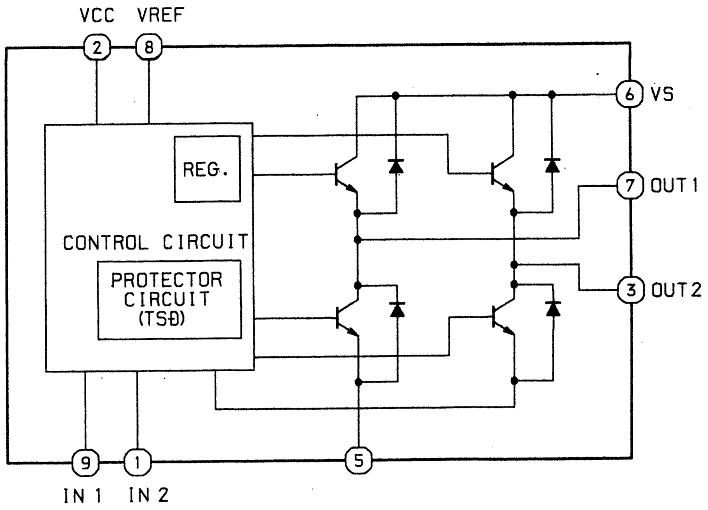
MIXL
VCAL
VCC
DEFL
DETL
GND
DETR
DEFR
CTL
VCAR
MIXR
OUTL
INL
APFL
HPFL
LPFL
BIASC
LPFR
HPFR
APFR
INR
OUTR
HI
MID
LO
VCA
HPF
LPF
CTL

IC, BH3854S



FILTER
IN2
NF2
BVN2
BIN2
BVO2
TIN2
TVO2
OUT2
VC
TC
BC
CK
DATA
LATCH
VREF
10K
20K
(BASS)
(TREBLE)
TONE CONTROL
VCC
47K
MATRIX SURROUND SOUND
VOLUME
CONTROL
3.8V
REF. VOLTAGE
A GND
IN1
NF1
BVN1
BIN1
BVO1
TIN1
TVO1
OUT1
VCC
SC
PORT1
PORT2
PORT3
PORT4
D GND

IC, TA7291S

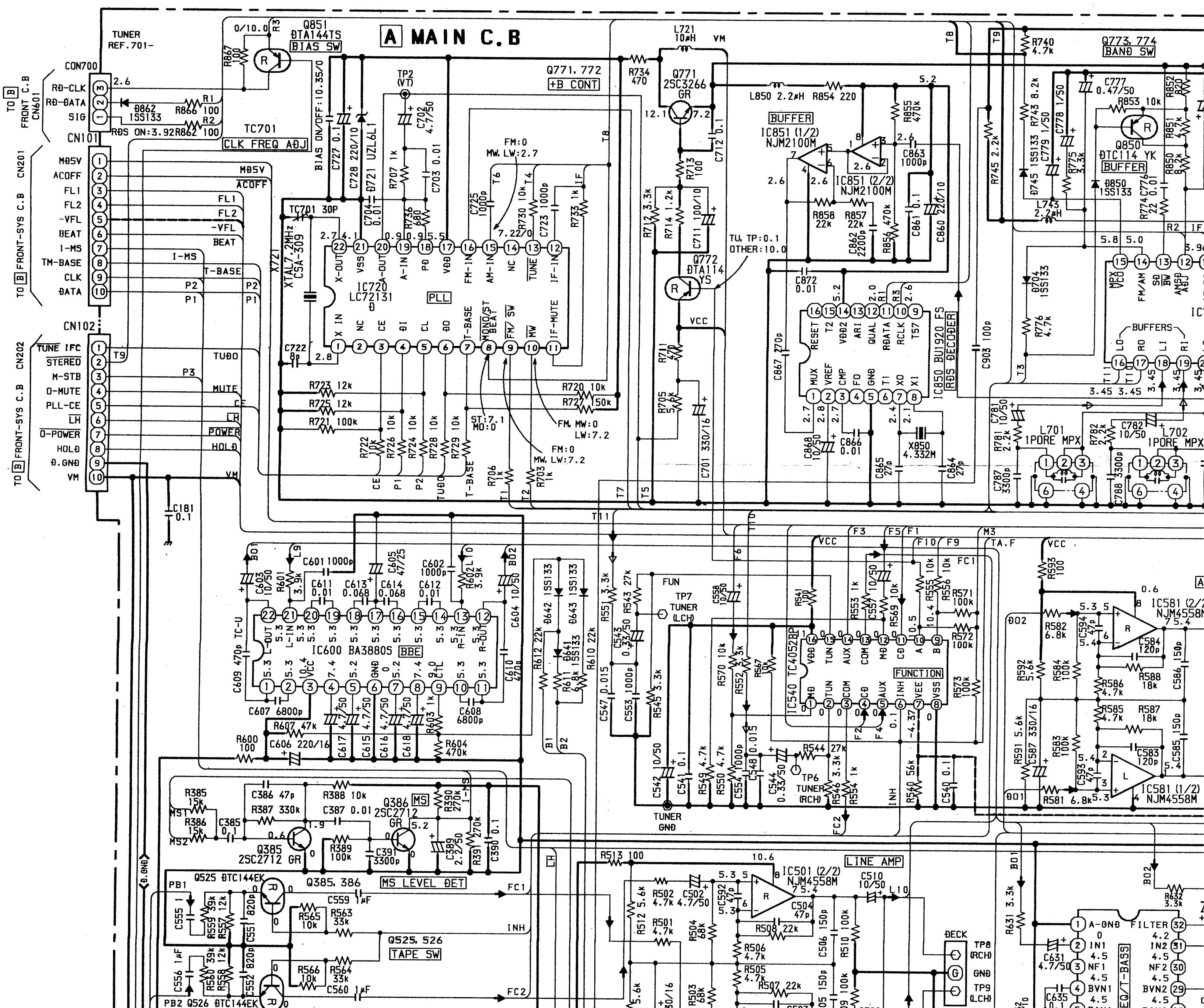


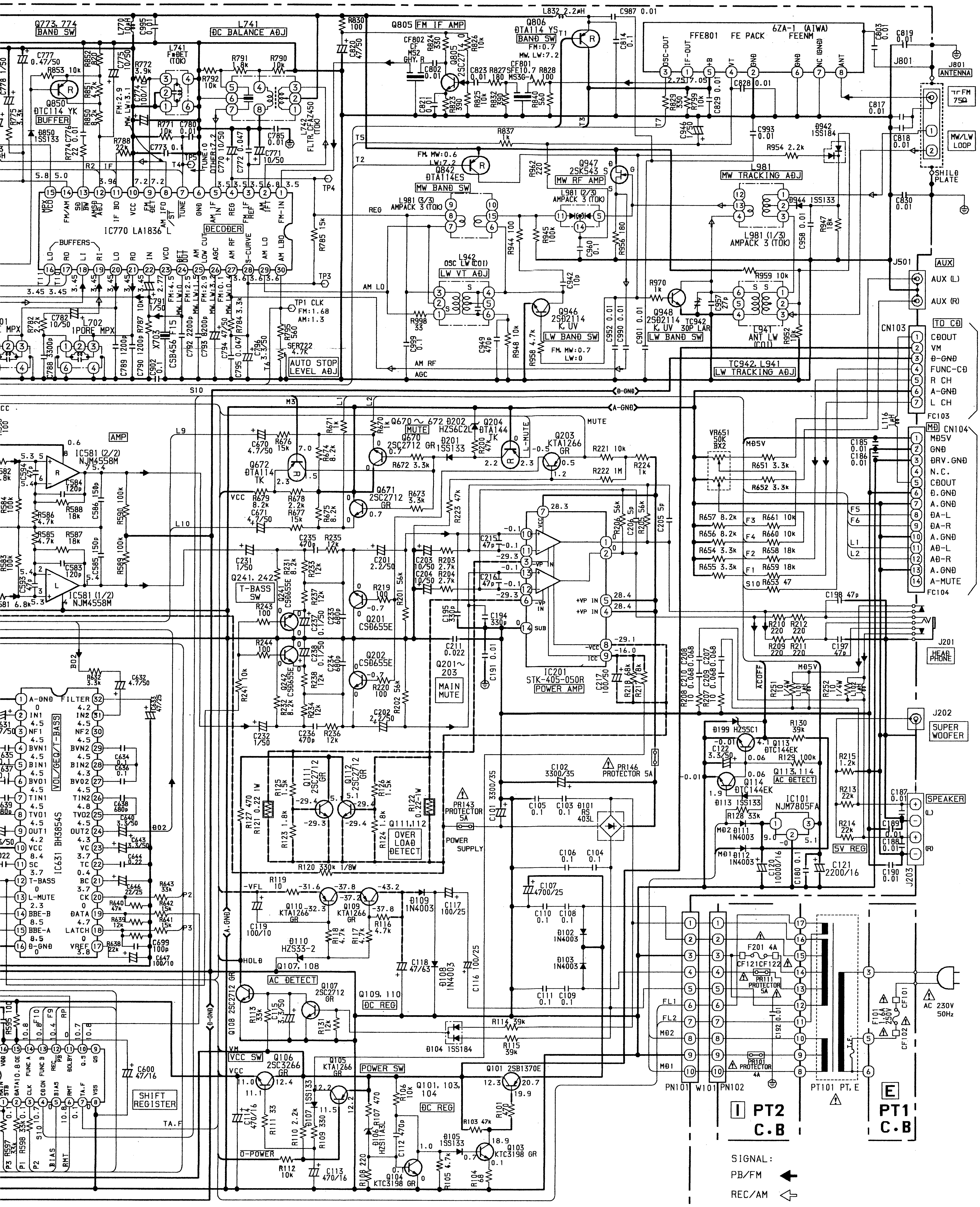
VCC
VREF
VS
OUT 1
OUT 2
REG.
CONTROL CIRCUIT
PROTECTOR CIRCUIT (TSD)
IN 1
IN 2

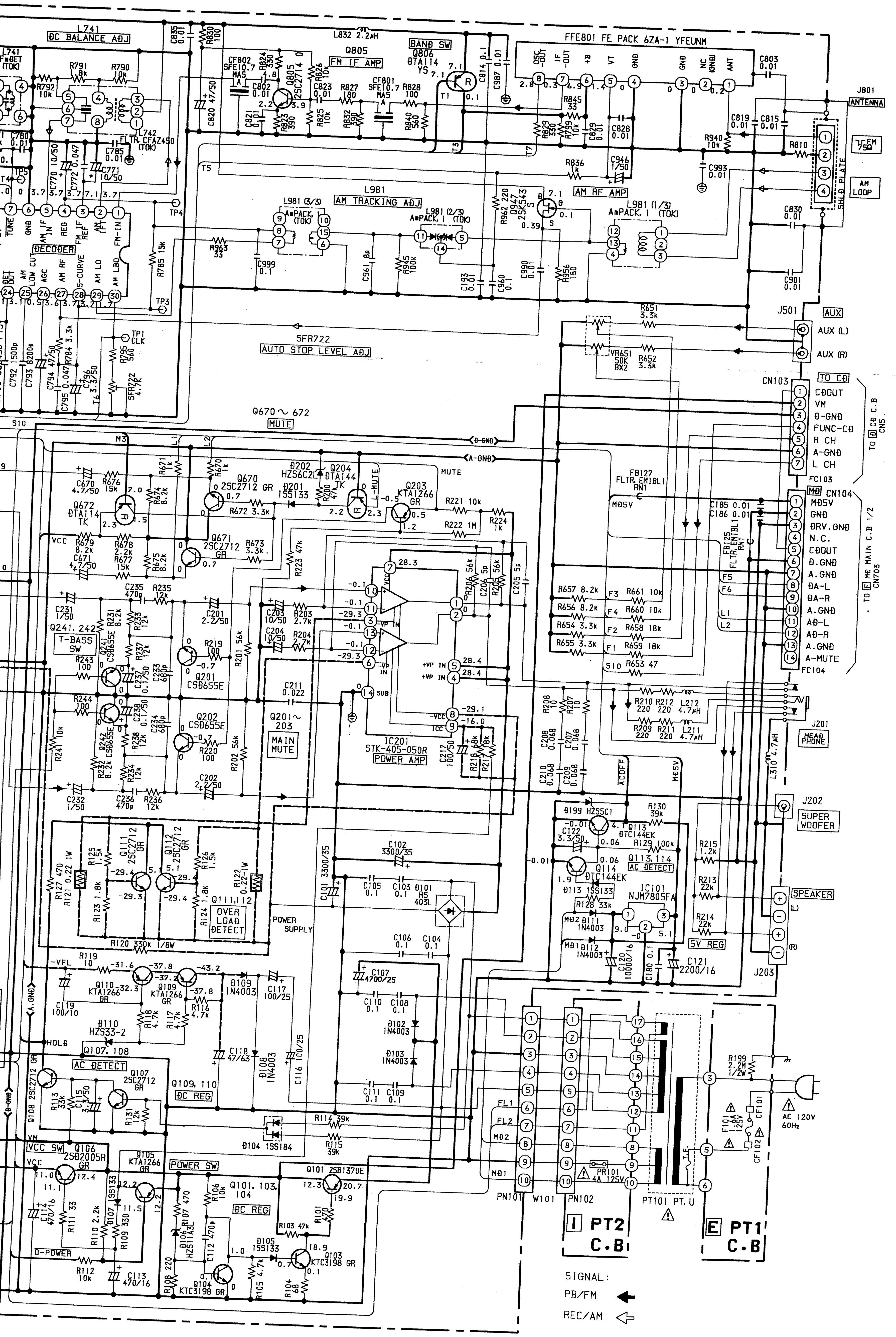
INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW
0	1	L	H	CCW
1	1	L	L	BRAKE

∞ : HI IMPEDANCE
NOTE : INPUT "H" ACTIVE

SCHEMATIC DIAGRAM – 2 (MAIN : EZ)


A MAIN C.B
TUNER REF.701-
CON700
CN101
CN102
TO B FRONT C.B CN601
TO B FRONT-SYS C.B CN201
TO B FRONT-SYS C.B CN202
RD-CLK
RD-DATA
SIG
RDS ON:3.92
M05V
ACOFF
FL1
FL2
-VFL
BEAT
I-MS
TM-BASE
CLK
DATA
TUNE IFC
STEREO
M-STB
O-MUTE
PLL-CE
LH
O-POWER
HOLD
D.GND
VM
Q851 DTA144TS BIAS SW
TC701 CLK FREQ ADJ
Q771, 772 +B CONT
Q771 2SC3266 GR
Q772 DTA114YS
L721 10μH
IC720 LC72131 PLL
XTAL7.2MHz CSA-309
FM:0 MW, LW:2.7
TU, TP:0.1 OTHER:10.0
BUFFER
IC851 (1/2) NJM2100M
IC851 (2/2) NJM2100M
IC850 BU1920 FS RDS DECODER
X850 4.332M
Q773, 774 BAND SW
Q850 DTC114 YK BUFFER
L701 IPORE MPX
L702 IPORE MPX
BUFFERS
IC600 BA3880S BBE
IC540 TC4052BP FUNCTION
TP7 TUNER (LCH)
TP6 TUNER (RCH)
TUNER GND
IC581 (1/2) NJM4558M
IC581 (2/2) NJM4558M
Q385 2SC2712 GR
Q386 2SC2712 GR
Q385, 386 MS LEVEL DET
Q525 DTC144EK
Q526 DTC144EK
Q525, 526 TAPE SW
IC501 (2/2) NJM4558M LINE AMP
IC501 (1/2) NJM4558M
DECK
TP8 (RCH)
TP9 (LCH)
SFR301, 302 PB SENSITIVITY ADJ
REC/PB SWITCH
PB AMP
IC301 (1/2) NJM2068LD
DECK PB SELECT
Q307, 308
Q307 DTA144 EK
Q303 MUTE
Q305 DTC144 EK EQ SW
Q301 2SK246GR
Q303 2SC2712 Y
IC301 (2/2)
PB.R-IN
REC.OUT
V.REF
BIAS MUTE
REC/PB
PB.R-OUT
LH
VCC
TO/FROM A MAIN C.B (2/2)
DOLBY
IC401 HA12134A
IC631 BH3854S VOL/GEQ/T-BASS
D631 HZS9A2L
RPH
L CH
R CH
EH
CN301
PN301
H RELAY C.B
AZIMUTH ADJ
BIAS OSC
Q312 KTC3198 GR
Q312 BIAS SW
L331 OSC 85K BIAS
Q310 2SC3265Y
Q311 2SC3265Y
Q310, 311 BIAS OSC
Q320 2SC2712 Y BEAT SW
SFR331, 332 REC/PB FREQ RESPONSE ADJ
REC AMP
Q351 2SA1162GR
Q351 MUTE
IC302 (1/2) NJM4558L
Q353 DTC144EK EQ SW
SFR351, 352 REC/PB SENSITIVITY ADJ
REC.MUTE
REC.OUT-R
V.REF
IC302 (2/2)
REC.R-IN
TO A MAIN C.B (2/2)
IC595 BU4094BC
A.GND
D.GND


Q773, 774 BAND SW
L741 DC BALANCE ADJ
Q805 FM IF AMP
Q806 DTA114 YS BAND SW
FFE801 FE PACK
6ZA-1 (AIWA) FEENM
J801 ANTENNA
FM 75Ω
MW/LW LOOP
SHIELD PLATE
Q850 DTC114 YK BUFFER
L742 FLTR, CFZ450 (TOK)
Q842 DTA114ES MW BAND SW
Q947 2SK543 MW RF AMP
L981 MW TRACKING ADJ
IC770 LA1836 L
DECODER
BUFFERS
L981 (1/3) AMPACK 3 (TOK)
L942 OSC LW (C01) LW VT ADJ
Q946 2SD2114 K, UV LW BAND SW
Q948 2SD2114 K, UV LW BAND SW
L941 ANT LW (C01)
TC942, L941 LW TRACKING ADJ
TP1 CLK FM:1.68 AM:1.3
TP3
TP4
TP5
SFR722 4.7K AUTO STOP LEVEL ADJ
AUX
AUX (L)
AUX (R)
J501
CN103
TO CD
CDOUT
VM
D-GND
FUNC-CD
R CH
A-GND
L CH
FC103
TO D CD C.B CN5
MD CN104
MD5V
GND
DRV.GND
N.C.
CDOUT
D.GND
A.GND
DA-L
DA-R
A.GND
AD-L
AD-R
A.GND
A-MUTE
FC104
TO E MD MAIN C.B 1/2 CN703
AMP
IC581 (2/2) NJM4558M
IC581 (1/2) NJM4558M
Q670 ~ 672 D202 MUTE
Q204 DTA144 L-MUTE
Q203 KTA1266 GR
Q241, 242 T-BASS SW
Q201 CS8655E
Q202 CS8655E
IC201 STK-405-050R POWER AMP
Q201~203 MAIN MUTE
VR651 50K BX2
J201 HEAD PHONE
J202 SUPER WOOFER
SPEAKER
IC631 BH3854S
VOL/GEQ/T-BASS
Q111, 112 OVER LOAD DETECT
PR143 PROTECTOR 5A
POWER SUPPLY
PR146 PROTECTOR 5A
D101 RS 403L
Q113, 114 AC DETECT
IC101 NJM7805FA
5V REG
Q107, 108 AC DETECT
Q109, 110 DC REG
SHIFT REGISTER
Q106 2SC3266 GR VCC SW
Q105 KTA1266 GR POWER SW
Q101 2SB1370E
Q101, 103, 104 DC REG
D-POWER
PN101
W101
PN102
F201 4A
CF121 CF122
PR111 PROTECTOR 5A
PR101 PROTECTOR 4A
PT101 PT, E
F101 1.6A 250V
CF101
CF102
AC 230V 50Hz
I PT2 C.B
E PT1 C.B
SIGNAL:
PB/FM
REC/AM


FFE801 FE PACK 6ZA-1 YFEUNM
ANT
NC (GND)
GND
VT
+B
IF -OUT
OSC -OUT
J801
ANTENNA
75Ω FM
AM LOOP
SHLD PLATE
L741
DC BALANCE ADJ
Q805
FM IF AMP
BAND SW
Q806
DTA114 YS
L832 2.2μH
AM RF AMP
L981
AM TRACKING ADJ
L981 (1/3) A■PACK 1 (TOK)
L981 (2/3) A■PACK 1 (TOK)
L981 (3/3) A■PACK (TOK)
Q947 2SK543
DECODER
TUNE
AM IF IN
REG
FM IF REF
AM IF
FM-IN
AM LOW CUT
AGC
AM RF
S-CURVE
AM LO
AM LBO
TP1 CLK
TP3
TP4
TP5
SFR722
AUTO STOP LEVEL ADJ
J501
AUX
AUX (L)
AUX (R)
VR651 50K BX2
CN103
TO CD
CDOUT
VM
D-GND
FUNC-CD
R CH
A-GND
L CH
TO D CD C.B CN5
FC103
MD CN104
MD5V
GND
DRV.GND
N.C.
CDOUT
D.GND
A.GND
DA-L
DA-R
AD-L
AD-R
A-MUTE
FC104
TO E MD MAIN C.B 1/2 CN703
FB127 FLTR, EMIBL1 RN1
FB125 FLTR, EMIBL1 RN1
Q670 ~ 672
MUTE
L-MUTE
Q670 2SC2712 GR
Q671 2SC2712 GR
Q672 DTA114 TK
Q203 KTA1266 GR
Q204 DTA144 TK
D202 HZS6C2L
D201 1SS133
Q241, 242
T-BASS SW
Q201 CSD655E
Q202 CSD655E
Q201~203
MAIN MUTE
IC201
STK-405-050R
POWER AMP
J201
HEAD PHONE
L310 4.7μH
J202
SUPER WOOFER
SPEAKER
J203
Q111, 112
OVER LOAD DETECT
POWER SUPPLY
D101 RS 403L
Q113, 114
AC DETECT
IC101 NJM7805FA
5V REG
ACOFF
Q109, 110
DC REG
Q107, 108
AC DETECT
HOLD
Q108 2SC2712 GR
Q106 2SD2005R GR
VCC SW
Q105 KTA1266 GR
POWER SW
Q101, 103, 104
DC REG
Q101 2SB1370E
D-POWER
PN101
W101
PN102
I PT2 C.B
PT101 PT. U
E PT1 C.B
AC 120V 60Hz
F101 1.6A 125V
PR101 4A 125V
S10
A-GND
D-GND
SIGNAL:
PB/FM
REC/AM

MD MECHANISM PARTS LIST 1/2

RIGHTEOUS

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
15	86-ZG2-202-010	2A	HLDR ASSY,CTRG
34	86-ZG2-236-010	0E	SPR-C,LVR OPEN
35	86-ZG2-201-010	1D	CHAS,LOADING

MISTAKE

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
15	86-ZG2-201-010	1D	CHAS,LOADING
34	86-ZG2-202-010	2A	HLDR ASSY,CTRG
35	86-ZG2-236-010	0E	SPR-C,LVR OPEN

サービス技術ニュース	
番号	連絡内容
G－　－	
G－　－	
G－　－	

アイワ株式会社
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Tokyo Japan

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SERVICE

AM-X1
AM-H30
XR-MD50
XR-MD60
CSD-MD1

- BASIC MD MECHANISM: 6ZG-2 B, 6ZG-5 A
- TYPE: D,EZ,U

SERVICE MANUAL

CORRECTION

MODEL NAME	TYPE	MECHANISM	S/M Code No.
AM-X1	D	6ZG-2 B	09-969-144-40T
AM-H30	E Z	6ZG-5 A	09-975-177-9FP
XR-MD50	D	6ZG-5 A	09-96C-173-4FP
XR-MD50	U,EZ	6ZG-5 A	09-974-178-9FP
XR-MD60	D	6ZG-5 A	09-971-165-3FP
CSD-MD1	D	6ZG-5 A	09-972-156-8FE